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Atomic Emission Lines in the Near Ultraviolet; Hydrogen Through Krypton

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Raymond L. Kelly

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Goddard Space Flight Center
Greenbelt, Maryland 20771

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HYDROGEN THROUGH KRYPTON
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Raymond L. Kelly
Professor of Physics
Naval Postgraduate School
Monterey

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ABSTRACT

A compilation of atomic lines from the first 36 elements observed in emission or absorption covering the wavelength range 2000Å–3200Å. Section I is the Multiplet List. Section II is the Finding List.

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ATOMIC EMISSION LINES IN THE NEAR ULTRAVIOLET; HYDROGEN THROUGH KRYPTON

INTRODUCTION

This compilation has been prepared from published literature available through October 1977, although some information from preprints and unpublished reports is included. It is intended as an aid to the stellar spectroscopist with the problem of identifying spectra obtained above the earth's atmosphere with satellites or rockets.

Spectra from the first 36 elements make up the compilation. In most cases, only those lines which have been actually observed in emission or absorption are listed. The wavelengths included range from 2000 Angstroms to 3200 Angstroms with some additional lines up to 3500 Angstroms. Only lines of stripped atoms are reported; no molecular bands are included.

ARRANGEMENT OF THE TABLES

The tabulation is divided into two main sections. Section I lists the lines by spectrum, and Section II is the finding list of all the lines listed in Section I.

The entries in Section I are arranged by element (ordered by atomic number), with subdivision into the first spectrum, second spectrum, etc. Within each spectrum, the lines are arranged in order of increasing wavelengths. This means that in a multiplet with several lines, those lines may not be listed consecutively.

WAVELENGTHS

Wavelengths above 2000 Angstroms are traditionally given as they are observed in air. We have listed both air wavelength and vacuum wavelength, the conversion utilizing Edlen's formula*

*B. Edlen, J. Opt. Soc. Am. 43, 339 (1953).

for the dispersion of standard air. The vacuum wavenumber can of course be obtained from the reciprocal of the vacuum wavelength.

The accuracy of the wavelength varies with the date of observation (because of the wavelength standards) and also with the wavelength range covered, the type of equipment, etc. As a general guide, lines measured since 1960 and with wavelengths reported to a tenth of a milliangstrom have an uncertainty less than 2 milliangstrom; all other lines have uncertainties of at least two or three in the last figure given.

INTENSITY

Only a single intensity is given for each line, selected where possible from the source in which the particular spectrum was reported as most prominent. The listed intensities have been normalized to a maximum value of 1000 for convenience in comparing the different references. The normalization procedure was usually a linear transformation of the intensities reported by the original authors, but logarithmic transformations have also been used. The normalization to a maximum of 1000 in this report was adopted as a compromise between the long-standing scale extending from 00 to 10 and some later publications with maximum intensities of 100,000 or even more.

As always, the comparison of intensities presents a most vexing problem, particularly when one reference overlaps another. There continues to be a need for a single, consistently used intensity scale. In most publications, the intensities are visual estimates of emulsion blackening. Such intensities are significant over only a limited range of wavelengths, for a particular source, operated in some particular way. For various reasons, intensities given by different observers are seldom compatible. The intensity figures, which must always be regarded as rather imprecise, have the following meaning: when two lines in a narrow wavelength region are reported with different intensities by the same observer, the one with the larger number will generally be the more intense.

MULTIPLER NUMBERS

The multiplet numbers assigned by C. E. Moore (see the reference list) are given following the wavelength. Some lines missing from the multiplet tables are added, but overlapping lines with the same wavelength in a multiplet have not been listed twice.

REFERENCES

References (listed in numerical order at the end of this report) are given with each spectral line to allow the reader to refer to the original publication.

PROCEDURES

After a thorough literature search, the observed air or vacuum wavelengths, vacuum wave-numbers, and intensities were punched onto IBM cards. A computer program was written to check the internal consistency of the wavelength-wavenumber pair and to punch a new card when all the data were correct. A substantial number of typographical errors were discovered (and corrected) in this way. Undoubtedly others remained undiscovered, but it is hoped there will be few in the final data set.

When all the wavelength cards were completed, they were read onto magnetic tapes (by spectrum) and sorted by wavelength into a finding list. The listings were searched manually for duplicates and corrections made where errors were discovered.

It is anticipated that a great deal of further checking will be carried out in the future. This additional work will require checking the observed wavelengths against those calculated from transitions between the known energy levels. (A complete file of atomic energy levels is maintained at the Naval Postgraduate School's Spectroscopic Data Center.) Such checking will allow a better evaluation of the published classifications of the spectral lines, as well as providing a means of including the classification and the excitation energy of upper and lower states of the transition in subsequent publications. Grouping the transitions into multiplets will be somewhat simplified.

DESCRIPTION OF THE TABLES

Column 1. Element and spectrum number

Column 2. Vacuum wavelength in Angstroms

Column 3. Air wavelength in Angstroms

Column 4. Intensity

Column 5. Multiplet number (U from the Ultraviolet Multiplet Table, ref. 488 and V from the Revised Multiplet Table, ref. 1015)

Column 6. Reference numbers

Column 7. Notes about the line

P Predicted value of wavelength given

F Forbidden line

A Upper level in the transition above the first ionization limit – may be autoionizing

N Unclassified

M Uncertain stage of ionization

Q Questionable classification

S Observed in solar spectrum

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AL	I	2099.727	2099.060			1006		AL	I	2314.237	2313.526	60	12.	198	
AL	I	2103.225	2102.558			1006		AL	I	2315.694	2314.983	25	12.	198	
AL	I	2103.473	2102.806			1006		AL	I	2318.194	2317.482	80	12.	198	
AL	I	2108.194	2107.526			1006		AL	I	2319.770	2319.057	40	12.	198	
AL	I	2109.265	2108.596			1006		AL	I	2322.275	2321.562	130	12.	198	
AL	I	2114.262	2113.593			1006		AL	I	2367.776	2367.053	100	4.	198	
AL	I	2117.212	2116.542			1006		AL	I	2368.334	2367.611	100	11.	198	
AL	I	2122.247	2121.576			1006		AL	I	2368.835	2368.112	100	11.	198	
AL	I	2124.033	2123.362	3		198		AL	I	2370.028	2369.304	160	11.	198	
AL	I	2127.974	2127.302			1006		AL	I	2370.949	2370.225	130	11.	198	
AL	I	2130.335	2129.663	3		198		AL	I	2371.450	2370.726	60	11.	198	
AL	I	2133.061	2132.388			1006		AL	I	2372.794	2372.070	160	3.	198	
AL	I	2135.407	2134.733	7		198		AL	I	2372.753	2372.070	160	11.	198	
AL	I	2143.077	2142.402			1006		AL	I	2373.847	2373.122	100	4.	198	
AL	I	2146.230	2145.555	15		198		AL	I	2374.075	2373.351	7	4.	198	
AL	I	2148.236	2147.560			1006		AL	I	2374.296	2373.571	100	11.	198	
AL	I	2151.376	2150.699	40		198		AL	I	2375.221	2374.496	25	11.	198	
AL	I	2161.062	2160.383	15		198		AL	I	2514.062	2513.305	40		198	
AL	I	2165.257	2164.577	G		198		AL	I	2519.980	2519.222	25		198	
AL	I	2165.595	2164.915	7		198		AL	I	2520.272	2519.514	3		198	
AL	I	2169.506	2168.826	3	9.	198		AL	I	2568.753	2567.983	160	2.	198	
AL	I	2170.524	2169.843	G		198		AL	I	2575.866	2575.095	160	2.	198	
AL	I	2174.752	2174.071	3	9.	198		AL	I	2576.170	2575.397	15	2.	198	
AL	I	2174.794	2174.113	G	9.	198		AL	I	2653.264	2652.475	160	1.	198	
AL	I	2178.078	2177.396	25	10.	198		AL	I	2658.197	2657.406	15		198	
AL	I	2181.679	2180.996	40	10.	198		AL	I	2661.178	2660.386	160	1.	198	
AL	I	2199.870	2199.183	3	8.	198		AL	I	2741.791	2740.980	25		198	
AL	I	2200.33	2199.64		8.	488		AL	I	2748.878	2748.065	15		198	
AL	I	2205.307	2204.619	7	8.	198		AL	I	2838.691	2837.856	7	13.	198	
AL	I	2205.354	2204.668	7	7.	198		AL	I	2838.798	2837.963	80	13.	198	
AL	I	2210.749	2210.060	7	7.	198		AL	I	2840.934	2840.099	80	13.	198	
AL	I	2210.819	2210.130	G	7.	198		AL	I	2841.040	2840.205	7	13.	198	
AL	I	2258.707	2258.008	7	6.	198		AL	I	2895.077	2894.228	15		198	
AL	I	2264.163	2263.463	25	5.	198		AL	I	2903.108	2902.258	15		198	
AL	I	2264.438	2263.738	7	6.	198		AL	I	2914.120	2913.267	7		198	
AL	I	2266.715	2266.014	15		198		AL	I	3050.960	3050.073	270	7.	198	
AL	I	2269.798	2269.096	25	5.	198		AL	I	3055.567	3054.679	40	7.	198	
AL	I	2269.913	2269.222	7	5.	198		AL	I	3058.033	3057.144	315	7.	198	
AL	I	2311.746	2311.035	25	12.	198		AL	I	3059.918	3059.029	25	7.	198	
AL	I	2313.202	2312.491	40	12.	198		AL	I	3060.814	3059.924	25	7.	198	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AL	I	3065.181	3064.290	80	7.	198	
AL	I	3067.036	3066.145	40	7.	198	
AL	I	3083.0481	3082.1529	850	3.	198	
AL	I	3087.91	3087.02	40	19.	1015	
AL	I	3093.6077	3092.7099	1000	3.	198	
AL	I	3093.7364	3092.8386	580	3.	198	
AL	I	3204.32	3203.39	25	20.	1015	
AL	II	2016.5150	2015.8652	70		379	
AL	II	2016.7022	2016.0523	150		379	
AL	II	2016.8436	2016.1937	80		379	
AL	II	2016.8843	2016.2344	150		379	
AL	II	2016.9850	2016.3351	50		379	
AL	II	2017.0182	2016.3682	100		379	
AL	II	2022.7324	2022.0806	40		379	
AL	II	2074.6685	2074.0079	200		379	
AL	II	2082.1415	2081.4805	15	3.	379	
AL	II	2087.5269	2086.8642	30	3.	379	
AL	II	2094.9295	2094.2644	700		379	
AL	II	2095.4092	2094.7440	150		379	
AL	II	2095.4559	2094.7906	300		379	
AL	II	2095.7688	2095.1035	100		379	
AL	II	2095.8065	2095.1411	200		379	
AL	II	2100.3790	2099.7142	80		379	
AL	II	2296.25	2295.54	15	14.	1015	
AL	II	2476.006	2475.260	25	12.	488	
AL	II	2533.416	2532.655	10	15.	488	
AL	II	2533.92	2533.16	5	15.	488	
AL	II	2534.17	2533.41	2	15.	488	
AL	II	2632.336	2631.553	80	11.	488	
AL	II	2638.481	2637.696	40	14.	488	
AL	II	2638.967	2638.182	2	14.	488	
AL	II	2639.048	2638.263	25	14.	488	
AL	II	2639.332	2638.547	1	14.	488	
AL	II	2639.410	2638.625	2	14.	488	
AL	II	2639.480	2638.695	15	14.	488	
AL	II	2669.958	2669.166	160	1.	488	
AL	II	2817.016	2816.189	650	7.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AL	II	2902.99	2902.14	10	13.	488	
AL	II	2904.07	2903.22	5	13.	488	
AL	II	2904.568	2903.718	2	13.	488	
AL	II	2995.13	2994.26	10	14.	1015	
AL	II	2999.03	2998.16	30	14.	1015	
AL	II	3023.68	3022.80	5	13.	1015	
AL	II	3024.99	3024.11	10	13.	1015	
AL	II	3027.66	3026.78	15	13.	1015	
AL	II	3042.163	3041.278	150	28.	1015	
AL	II	3075.526	3074.635	150	27.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
AL	II	3089.418	3088.523	50	20.	1015		AL	III	2961.910	2961.005	1		826	
AL	II	3136.7568	3135.8507	60	19.	379		AL	III	2961.998	2961.060	10		826	
AL	II	3276.7118	3275.7683	40	5.	379		AL	III	3181.031	3180.111	40		826	
AL	II	3314.295	3313.344	50	8.	1015		AL	III	3184.745	3183.824	70		826	
AL	II	3314.421	3313.470	5	8.	1015		AL	III	3284.262	3283.316	20	10.	826	
AL	II	3315.708	3314.756	5	8.	1015	F	AL	III	3288.249	3287.302	40	10.	826	
AL	II	3315.835	3314.883	30	8.	1015		AL	III	3349.480	3348.517	360		826	
AL	II	3315.933	3314.981	1	8.	1015		AL	III	3351.848	3350.885	285		826	
AL	II	3316.468	3315.516	2	8.	1015	F	AL	III	3525.97	3524.90	D		826	
AL	II	3316.560	3315.608	10	8.	1015		AL	III	3602.656	3601.628	870		826	
AL	II	3352.418	3351.456	50	26.	1015		AL	III	3602.953	3601.926	550		826	
AL	II	3429.897	3428.916	150	25.	1015		AL	III	3613.386	3612.356	750		826	
AL	II	3464.62	3463.63	1	55.	1015									
AL	III	2014.626	2013.973	D		826		AL	IV	2016.84	2016.19	30		888	
AL	III	2074.301	2073.632	D		826		AL	IV	2129.12	2128.45	40		888	
AL	III	2074.388	2073.686	D		826		AL	IV	2131.51	2130.84	200		385	
AL	III	2089.864	2089.163	D		826		AL	IV	2131.51	2130.84	200		385	
AL	III	2093.364	2092.667	D		826		AL	IV	2131.59	2130.92	200		888	
AL	III	2155.312	2154.629	5		826		AL	IV	2146.93	2146.25	15		888	
AL	III	2168.069	2167.373	D		826		AL	IV	2152.97	2152.29	30		888	
AL	III	2210.238	2209.508	5		826		AL	IV	2159.00	2158.32	100		888	
AL	III	2214.153	2213.428	2		826		AL	IV	2161.80	2161.12	5		888	
AL	III	2214.153	2213.460	20		826		AL	IV	2162.92	2162.24	15		888	
AL	III	2300.120	2299.360	20		826		AL	IV	2177.52	2176.84	5		888	
AL	III	2300.173	2299.428	10		826		AL	IV	2184.73	2184.05	10		888	
AL	III	2399.750	2398.995	110		826		AL	IV	2209.83	2209.14	15		888	
AL	III	2423.185	2422.406	3		826		AL	IV	2211.90	2211.21	3		888	
AL	III	2525.189	2524.401	D		826		AL	IV	2212.90	2212.21	2		888	
AL	III	2525.253	2524.477	D		826		AL	IV	2229.82	2229.13	30		888	
AL	III	2526.018	2525.244	D		826		AL	IV	2241.16	2240.47	50		888	
AL	III	2763.652	2762.767	285		826		AL	IV	2241.257	2240.563	300		888	
AL	III	2763.729	2762.871	220		826		AL	IV	2257.884	2257.187	100		888	
AL	III	2832.540	2831.699	D		826		AL	IV	2261.537	2260.838	60		888	
AL	III	2835.512	2834.672	D		826		AL	IV	2273.050	2272.348	20		888	
AL	III	2877.698	2876.819	D		826		AL	IV	2273.36	2272.66	50		888	
AL	III	2878.692	2877.815	D		826		AL	IV	2283.730	2283.027	40		888	
AL	III	2907.822	2906.930	450		826		AL	IV	2287.71	2287.01	2		888	
AL	III	2961.910	2960.974	5		826		AL	IV	2288.99	2288.29	2		888	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AL	IV	2301.75	2301.04	3		888	
AL	IV	2324.84	2324.13	20		888	
AL	IV	2368.995	2368.272	40		888	
AL	IV	2371.751	2371.027	50		888	
AL	IV	2384.080	2383.355	5		888	
AL	IV	2395.252	2394.524	50		888	
AL	IV	2496.22	2495.47	80		888	
AL	IV	2497.89	2497.14	200		888	
AL	IV	2502.12	2501.37	5		888	
AL	IV	2508.35	2507.60	3		888	
AL	IV	2508.51	2507.76	300		888	
AL	IV	2508.76	2508.01	300		888	
AL	IV	2515.06	2514.30	200		888	
AL	IV	2516.24	2515.48	100		888	
AL	IV	2516.63	2515.87	400		888	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AL	IV	2516.96	2516.20	80		888	
AL	IV	2518.05	2517.29	200		888	
AL	IV	2521.44	2520.68	10		888	
AL	IV	2523.04	2522.28	5		888	
AL	IV	2528.03	2527.27	150		888	
AL	IV	2528.26	2527.50	200		888	
AL	IV	2530.39	2529.63	6		888	
AL	IV	2530.66	2529.90	10		888	
AL	IV	2625.32	2624.54	5		888	
AL	IV	2869.82	2868.98	5		888	
AL	IV	2962.15	2961.29	300		888	
AL	IV	3209.12	3208.20	500		888	
AL	IV	3215.06	3214.13	10		888	
AL	IV	3242.277	3241.343	20		888	
AL	IV	3247.078	3246.143	100		888	
AL	IV	3254.363	3253.426	15		888	
AL	IV	3268.154	3267.213	500		888	
AL	IV	3286.08	3285.13	600		888	
AL	IV	3298.890	3297.943	100		888	
AL	IV	3317.498	3316.546	200		888	
AL	IV	3333.919	3332.962	300		888	
AL	IV	3345.42	3344.46	400		888	
AL	IV	3424.104	3423.125	350		888	
AL	IV	3453.147	3452.159	50		888	
AL	IV	3474.530	3473.536	500		888	
AL	IV	3493.225	3492.226	900		888	
AL	IV	3509.457	3508.457	800		888	
AL	IV	3512.285	3511.284	500		888	
AL	IV	3518.559	3517.556	700		888	
AL	V	2480.50	2479.75	20		873	
AL	V	2482.34	2481.60	5		873	
AL	V	2605.48	2604.71	10		873	
AL	VI	2431.	2430.			108	F
AL	VI	2604.	2603.			108	F
AL	VI	2681.	2680.			108	F

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	I	3131.716	3130.809	60		517		AR	II	2029.211	2028.558	10		506	
AR	I	3187.563	3186.642	25		517		AR	II	2032.8316	2032.1778	30		867	
AR	I	3201.291	3200.366	150		517		AR	II	2035.4170	2034.7628	20		867	
AR	I	3204.584	3203.658	40		517		AR	II	2036.282	2035.629	5		506	
AR	I	3226.484	3225.553	60		517		AR	II	2040.145	2039.490	30		506	
AR	I	3264.713	3263.772	10		517		AR	II	2043.0170	2042.3613	30		867	
AR	I	3265.231	3264.291	10		517		AR	II	2046.811	2046.155	5		506	
AR	I	3272.134	3271.188	40		517		AR	II	2047.1494	2046.4930	40		867	
AR	I	3290.892	3289.946	10		517		AR	II	2048.6568	2048.0001	20		867	
AR	I	3299.94	3298.99	4		517		AR	II	2050.9811	2050.3240	20		867	
AR	I	3300.21	3299.26	4		517		AR	II	2051.4496	2050.7924	50		867	
AR	I	3301.352	3300.402	60		517		AR	II	2058.1714	2057.5129	50		867	
AR	I	3321.023	3320.071	25		517		AR	II	2058.7422	2058.0837	30		867	
AR	I	3323.386	3322.430	25		517		AR	II	2059.849	2059.190	10		506	
AR	I	3324.806	3323.850	90		517		AR	II	2060.738	2060.079	10		506	
AR	I	3360.447	3359.482	40		517		AR	II	2061.516	2060.855	5		506	
AR	I	3364.441	3363.475	60		517		AR	II	2064.4248	2063.7652	20		867	
AR	I	3382.473	3381.502	60		517		AR	II	2064.872	2064.212	50		506	
AR	I	3384.941	3383.969	10		517		AR	II	2074.0868	2073.4253	40		867	
AR	I	3391.266	3390.293	10		517		AR	II	2074.665	2074.003	10		506	
AR	I	3393.269	3392.295	10		517		AR	II	2076.8453	2076.1833	20		867	
AR	I	3419.56	3418.58	10		517		AR	II	2080.3158	2079.6531	40		867	
AR	I	3443.54	3442.55	25		517		AR	II	2081.020	2080.357	50		506	
AR	I	3443.57	3442.59	25		517		AR	II	2082.772	2082.109	30		506	
AR	I	3458.791	3457.800	10		517		AR	II	2087.4759	2086.8119	20		867	
AR	II	2000.6470	1999.9989	20	.	867									
AR	II	2003.972	2003.325	10	.	506									
AR	II	2004.5583	2003.9096	20	.	867									
AR	II	2005.563	2004.914	30	.	506									
AR	II	2007.827	2007.178	10	.	506									
AR	II	2011.791	2011.141	10	.	506									
AR	II	2014.962	2014.311	10	.	506									
AR	II	2015.9675	2015.3168	20	.	867									
AR	II	2019.4067	2018.7553	20	.	867									
AR	II	2022.41	2021.76	5	.	506									
AR	II	2023.38	2022.73	10	.	506									
AR	II	2023.7681	2023.1159	20	.	867									
AR	II	2025.385	2024.733	20	.	506									
AR	II	2025.8367	2025.1842	30	.	867									
AR	II	2027.255	2026.602	20	.	506									

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	2088.382	2087.718	10	.	506		AR	II	2131.646	2130.974	5	.	506	
AR	II	2092.2884	2091.6234	50	.	867		AR	II	2135.615	2134.941	10	.	506	
AR	II	2093.002	2092.337	30	.	506		AR	II	2136.189	2135.515	10	.	506	
AR	II	2093.429	2092.764	30	.	506		AR	II	2139.556	2138.882	30	.	506	
AR	II	2096.642	2095.976	10	.	506		AR	II	2141.422	2140.747	20	.	506	
AR	II	2097.474	2096.808	10	.	506		AR	II	2142.357	2141.682	20	.	506	
AR	II	2098.789	2098.123	10	.	506		AR	II	2142.9513	2142.2763	20	.	867	
AR	II	2099.030	2098.364	5	.	506		AR	II	2144.559	2143.884	30	.	506	
AR	II	2099.784	2099.118	10	.	506		AR	II	2147.5020	2146.8261	20	.	867	
AR	II	2100.58	2099.91	0	.	506		AR	II	2148.3584	2147.6823	20	.	867	
AR	II	2102.134	2101.467	10	.	506		AR	II	2151.2132	2150.5365	20	.	867	
AR	II	2104.0191	2103.3518	50	.	867		AR	II	2151.7286	2151.0518	60	.	867	
AR	II	2105.552	2104.885	30	.	506		AR	II	2152.61	2151.94	0	.	506	
AR	II	2106.603	2105.935	30	.	506		AR	II	2153.745	2153.068	30	.	506	
AR	II	2106.915	2106.247	10	.	506		AR	II	2154.657	2153.980	30	.	506	
AR	II	2107.205	2106.537	10	.	506		AR	II	2156.266	2155.588	10	.	506	
AR	II	2108.7379	2108.0697	20	.	867		AR	II	2159.433	2158.755	20	.	506	
AR	II	2109.553	2108.886	10	.	506		AR	II	2159.5616	2158.8832	20	.	867	
AR	II	2109.7167	2109.0483	20	.	867		AR	II	2159.724	2159.046	20	.	506	
AR	II	2111.416	2110.747	20	.	506		AR	II	2162.574	2161.895	30	.	506	
AR	II	2111.5653	2110.8965	20	.	867		AR	II	2162.9695	2162.2904	20	.	867	
AR	II	2115.201	2114.532	10	.	506		AR	II	2165.030	2164.351	20	.	506	
AR	II	2115.760	2115.090	10	.	506		AR	II	2165.719	2165.039	10	.	506	
AR	II	2116.881	2116.210	5	.	506		AR	II	2166.501	2165.821	60	.	506	
AR	II	2117.357	2116.687	50	.	506		AR	II	2171.595	2170.914	10	.	506	
AR	II	2118.604	2117.934	10	.	506		AR	II	2171.719	2171.038	10	.	506	
AR	II	2119.618	2118.948	10	.	506		AR	II	2171.993	2171.312	30	.	506	
AR	II	2120.6543	2119.9836	30	.	867		AR	II	2172.099	2171.418	50	.	506	
AR	II	2121.521	2120.850	10	.	506		AR	II	2173.022	2172.341	20	.	506	
AR	II	2121.977	2121.306	20	.	506		AR	II	2173.318	2172.637	20	.	506	
AR	II	2122.213	2121.542	10	.	506		AR	II	2173.890	2173.209	10	.	506	
AR	II	2125.944	2125.272	10	.	506		AR	II	2174.42	2173.74	0	.	506	
AR	II	2126.378	2125.706	10	.	506		AR	II	2174.872	2174.190	20	.	506	
AR	II	2127.3362	2126.6643	40	.	867		AR	II	2175.2654	2174.5839	50	.	867	
AR	II	2127.7221	2127.0501	20	.	867		AR	II	2176.318	2175.636	100	.	506	
AR	II	2128.3205	2127.6485	30	.	867		AR	II	2176.6463	2175.9644	20	.	867	
AR	II	2129.337	2128.665	10	.	506		AR	II	2177.069	2176.387	10	.	506	
AR	II	2130.0963	2129.4239	40	.	867		AR	II	2180.772	2180.089	20	.	506	
AR	II	2130.4813	2129.8088	30	.	867		AR	II	2180.930	2180.247	10	.	506	
AR	II	2131.102	2130.429	60	.	506		AR	II	2181.472	2180.789	10	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	2181.639	2180.956	5	.	506		AR	II	2225.242	2224.550	10	.	506	
AR	II	2181.894	2181.211	70	.	506		AR	II	2226.354	2225.662	60	.	506	
AR	II	2182.063	2181.378	10	.	506		AR	II	2227.991	2227.298	50	.	506	
AR	II	2183.530	2182.849	5	.	506		AR	II	2229.719	2229.024	5	.	506	
AR	II	2186.173	2185.489	50	.	506		AR	II	2230.341	2229.648	80	.	506	
AR	II	2187.9995	2187.3153	60	.	867		AR	II	2231.0130	2230.3197	30	.	867	
AR	II	2189.034	2188.350	0	.	506		AR	II	2231.717	2231.024	10	.	506	
AR	II	2189.176	2188.492	30	.	506		AR	II	2232.116	2231.423	50	.	506	
AR	II	2189.64	2188.95	0	.	506		AR	II	2234.172	2233.478	40	.	506	
AR	II	2190.193	2189.508	10	.	506		AR	II	2235.3666	2234.6724	60	.	867	
AR	II	2190.470	2189.784	10	.	506		AR	II	2236.4535	2235.7591	30	.	867	
AR	II	2190.9194	2190.2346	20	.	867		AR	II	2236.598	2235.904	20	.	506	
AR	II	2191.196	2190.511	40	.	506		AR	II	2237.227	2236.527	30	.	506	
AR	II	2191.972	2191.287	50	.	506		AR	II	2238.080	2237.385	10	.	506	
AR	II	2192.264	2191.579	40	.	506		AR	II	2238.4144	2237.7195	20	.	867	
AR	II	2192.9115	2192.2262	20	.	867		AR	II	2238.723	2238.028	10	.	506	
AR	II	2195.5927	2194.9069	20	.	867		AR	II	2240.309	2239.615	5	.	506	
AR	II	2196.1296	2195.4437	50	.	867		AR	II	2240.601	2239.906	10	.	506	
AR	II	2196.973	2196.287	10	.	506		AR	II	2241.724	2241.028	60	.	506	
AR	II	2197.075	2196.389	10	.	506		AR	II	2242.554	2241.858	20	.	506	
AR	II	2197.759	2197.072	0	.	506		AR	II	2244.3558	2243.6597	50	.	867	
AR	II	2198.472	2197.786	10	.	506		AR	II	2244.776	2244.080	10	.	506	
AR	II	2201.929	2201.242	20	.	506		AR	II	2245.0121	2245.1157	20	.	867	
AR	II	2202.260	2201.573	10	.	506		AR	II	2246.106	2245.410	20	.	506	
AR	II	2202.822	2202.135	10	.	506		AR	II	2246.671	2245.975	30	.	506	
AR	II	2205.386	2204.698	10	.	506		AR	II	2250.044	2249.347	30	.	506	
AR	II	2206.426	2205.738	40	.	506		AR	II	2250.355	2249.658	10	.	506	
AR	II	2208.832	2208.141	10	.	506		AR	II	2252.101	2251.403	20	.	506	
AR	II	2211.0061	2210.3171	20	.	867		AR	II	2252.9443	2252.2463	60	.	867	
AR	II	2211.572	2210.883	30	.	506		AR	II	2253.22	2252.52	5	.	506	
AR	II	2212.783	2212.094	5	.	506		AR	II	2253.536	2252.837	J	.	506	
AR	II	2214.812	2214.147	10	.	506		AR	II	2254.981	2254.283	50	.	506	
AR	II	2216.880	2216.190	40	.	506		AR	II	2255.877	2255.178	10	.	506	
AR	II	2219.066	2218.375	10	.	506		AR	II	2256.1054	2255.4067	30	.	867	
AR	II	2219.496	2218.805	40	.	506		AR	II	2257.244	2256.545	30	.	506	
AR	II	2220.6534	2219.9624	60	.	867		AR	II	2258.664	2257.965	10	.	506	
AR	II	2221.038	2220.347	20	.	506		AR	II	2259.041	2258.342	10	.	506	
AR	II	2222.043	2221.352	10	.	506		AR	II	2261.911	2261.211	5	.	506	
AR	II	2222.758	2222.066	30	.	506		AR	II	2263.332	2262.632	20	.	506	
AR	II	2223.100	2222.408	5	.	506		AR	II	2263.577	2262.877	5	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	2263.7690	2263.0687	20	.	867		AR	II	2302.534	2301.825	30	.	506	
AR	II	2264.829	2264.128	5	.	506		AR	II	2302.786	2302.077	40	.	506	
AR	II	2265.916	2265.215	40	.	506		AR	II	2306.148	2305.439	10	.	506	
AR	II	2267.141	2266.441	20	.	506		AR	II	2306.5689	2305.8593	20	.	867	
AR	II	2267.647	2266.946	5	.	506		AR	II	2307.976	2307.266	20	.	506	
AR	II	2267.812	2267.111	20	.	506		AR	II	2308.166	2307.456	20	.	506	
AR	II	2269.326	2268.625	10	.	506		AR	II	2309.858	2309.148	60	.	506	
AR	II	2269.641	2268.940	5	.	506		AR	II	2310.5703	2309.8598	20	.	867	
AR	II	2270.302	2269.598	5	.	506		AR	II	2313.974	2313.263	5	.	506	
AR	II	2273.126	2272.424	10	.	506		AR	II	2314.4307	2313.7194	70	.	867	
AR	II	2273.342	2272.640	20	.	506		AR	II	2314.431	2313.720	70	.	506	
AR	II	2273.466	2272.765	5	.	506		AR	II	2315.681	2314.970	60	.	506	
AR	II	2275.6231	2274.9262	30	.	867		AR	II	2316.018	2315.306	30	.	506	
AR	II	2275.757	2275.054	10	.	506		AR	II	2317.011	2316.299	80	.	506	
AR	II	2276.0648	2275.3618	30	.	867		AR	II	2318.4582	2317.7460	50	.	867	
AR	II	2277.44	2276.73	0	.	506		AR	II	2319.25	2318.54	0	.	506	
AR	II	2282.216	2281.512	10	.	506		AR	II	2320.546	2319.833	10	.	506	
AR	II	2283.3250	2282.6205	80	.	867		AR	II	2322.794	2322.081	20	.	506	
AR	II	2283.75	2283.05	0	.	506		AR	II	2325.1407	2324.4270	30	.	867	
AR	II	2283.948	2283.243	70	.	506		AR	II	2325.31	2324.60	5	.	506	
AR	II	2284.458	2283.753	10	.	506		AR	II	2328.498	2327.784	20	.	506	
AR	II	2284.699	2283.994	70	.	506		AR	II	2330.072	2329.357	10	.	506	
AR	II	2286.317	2285.612	10	.	506		AR	II	2332.167	2331.452	80	.	506	
AR	II	2286.5050	2285.7998	40	.	867		AR	II	2333.025	2332.310	10	.	506	
AR	II	2287.6302	2286.9247	40	.	867		AR	II	2333.608	2332.895	10	.	506	
AR	II	2289.471	2288.765	40	.	506		AR	II	2333.752	2333.036	20	.	506	
AR	II	2289.80	2289.09	5	.	506		AR	II	2336.985	2336.269	10	.	506	
AR	II	2290.0863	2289.3803	20	.	867		AR	II	2338.497	2337.780	60	.	506	
AR	II	2290.419	2289.713	30	.	506		AR	II	2339.78	2339.06	0	.	506	
AR	II	2290.477	2289.771	50	.	506		AR	II	2340.512	2339.795	40	.	506	
AR	II	2290.727	2290.021	5	.	506		AR	II	2344.922	2344.204	60	.	506	
AR	II	2291.1311	2290.4249	30	.	867		AR	II	2345.463	2344.745	5	.	506	
AR	II	2292.837	2292.130	40	.	506		AR	II	2346.22	2345.50	10	.	506	
AR	II	2296.056	2295.349	30	.	506		AR	II	2346.58	2345.86	0	.	506	
AR	II	2296.907	2296.202	5	.	506		AR	II	2347.289	2346.570	20	.	506	
AR	II	2298.353	2297.645	5	.	506		AR	II	2349.629	2348.910	10	.	506	
AR	II	2298.587	2297.879	20	.	506		AR	II	2350.23	2349.51	5	.	506	
AR	II	2299.414	2298.706	5	.	506		AR	II	2351.205	2350.486	50	.	506	
AR	II	2300.380	2299.672	10	.	506		AR	II	2353.451	2352.731	20	.	506	
AR	II	2300.887	2300.179	50	.	506		AR	II	2354.146	2353.426	30	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	2354.8520	2354.1317	60	.	867		AR	II	2396.73	2396.00	5	.	506	
AR	II	2355.513	2354.793	10	.	506		AR	II	2398.278	2397.548	20	.	506	
AR	II	2357.432	2356.711	10	.	506		AR	II	2399.102	2398.372	50	.	506	
AR	II	2358.310	2357.589	50	.	506		AR	II	2400.102	2399.372	20	.	506	
AR	II	2358.91	2358.19	5	.	506		AR	II	2400.581	2399.851	30	.	506	
AR	II	2359.129	2358.408	20	.	506		AR	II	2401.58	2400.85	5	.	506	
AR	II	2360.7808	2360.0592	40	.	867		AR	II	2401.75	2401.02	5	.	506	
AR	II	2361.499	2360.777	5	.	506		AR	II	2403.631	2402.900	10	.	506	
AR	II	2361.970	2361.248	5	.	506		AR	II	2403.968	2403.237	50	.	506	
AR	II	2362.542	2361.820	10	.	506		AR	II	2405.084	2404.352	90	.	506	
AR	II	2362.805	2362.083	10	.	506		AR	II	2405.960	2405.228	50	.	506	
AR	II	2363.588	2362.866	10	.	506		AR	II	2406.5124	2405.7805	30	.	867	
AR	II	2364.522	2363.800	5	.	506		AR	II	2407.1	2406.44	5	.	506	
AR	II	2364.835	2364.112	50	.	506		AR	II	2407.379	2406.647	50	.	506	
AR	II	2367.501	2366.778	20	.	506		AR	II	2408.594	2407.862	20	.	506	
AR	II	2367.971	2367.248	10	.	506		AR	II	2408.9397	2408.2072	40	.	867	
AR	II	2369.335	2368.612	10	.	506		AR	II	2409.676	2408.943	10	.	506	
AR	II	2369.911	2369.187	20	.	506		AR	II	2410.236	2409.503	20	.	506	
AR	II	2370.640	2369.916	20	.	506		AR	II	2410.435	2409.702	10	.	506	
AR	II	2371.355	2370.631	5	.	506		AR	II	2411.67	2410.94	60	.	506	
AR	II	2372.386	2371.662	10	.	506		AR	II	2412.857	2412.124	5	.	506	
AR	II	2372.4633	2371.7390	40	.	867		AR	II	2413.194	2412.461	40	.	506	
AR	II	2374.462	2373.737	5	.	506		AR	II	2413.643	2412.910	10	.	506	
AR	II	2377.155	2376.430	10	.	506		AR	II	2414.220	2413.486	10	.	506	
AR	II	2378.058	2377.332	10	.	506		AR	II	2414.9557	2414.2218	90	.	867	
AR	II	2380.155	2379.429	10	.	506		AR	II	2417.9446	2417.2100	40	.	867	
AR	II	2380.5882	2379.8621	30	.	867		AR	II	2419.439	2418.704	10	.	506	
AR	II	2381.854	2381.138	30	.	506		AR	II	2419.899	2419.164	10	.	506	
AR	II	2382.183	2381.456	10	.	506		AR	II	2420.148	2419.413	10	.	506	
AR	II	2383.292	2382.565	10	.	506		AR	II	2421.1914	2420.4561	110	.	867	
AR	II	2383.682	2382.955	10	.	506		AR	II	2422.237	2421.502	30	.	506	
AR	II	2384.213	2383.486	60	.	506		AR	II	2422.557	2421.822	5	.	506	
AR	II	2384.6645	2383.9375	20	.	867		AR	II	2422.825	2422.089	20	.	506	
AR	II	2385.696	2384.969	40	.	506		AR	II	2422.991	2422.255	10	.	506	
AR	II	2386.663	2385.936	10	.	506		AR	II	2423.431	2422.695	40	.	506	
AR	II	2388.6598	2387.9319	30	.	867		AR	II	2424.264	2423.528	50	.	506	
AR	II	2388.996	2388.268	10	.	506		AR	II	2425.395	2424.659	40	.	506	
AR	II	2389.728	2389.000	10	.	506		AR	II	2429.260	2428.523	10	.	506	
AR	II	2391.606	2390.878	20	.	506		AR	II	2430.183	2429.446	20	.	506	
AR	II	2393.537	2392.808	10	.	506		AR	II	2430.770	2430.032	50	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
AR	II	2432.36	2431.62	20	.	506		AR	II	2470.6239	2469.8773	30	.	867	
AR	II	2432.661	2431.923	10	.	506		AR	II	2471.1048	2470.3581	50	.	867	
AR	II	2435.0986	2434.3602	20	.	867		AR	II	2471.799	2471.052	10	.	506	
AR	II	2437.939	2437.200	10	.	506		AR	II	2472.49	2471.74	5	.	506	
AR	II	2438.256	2437.517	20	.	506		AR	II	2473.359	2472.612	10	.	506	
AR	II	2438.952	2438.213	10	.	506		AR	II	2473.987	2473.240	5	.	506	
AR	II	2440.46	2439.72	10	.	506		AR	II	2474.745	2473.998	40	.	506	
AR	II	2440.768	2440.028	40	.	506		AR	II	2475.000	2474.252	10	.	506	
AR	II	2442.028	2441.288	20	.	506		AR	II	2476.210	2475.462	40	.	506	
AR	II	2442.766	2442.026	5	.	506		AR	II	2477.46	2476.71	5	.	506	
AR	II	2443.534	2442.794	20	.	506		AR	II	2477.7185	2476.9702	20	.	867	
AR	II	2443.960	2443.219	20	.	506		AR	II	2479.8052	2479.0565	100	.	867	
AR	II	2444.23	2443.49	10	.	506		AR	II	2481.216	2480.467	30	.	506	
AR	II	2445.569	2444.828	30	.	506		AR	II	2481.607	2480.858	60	.	506	
AR	II	2445.737	2444.996	5	.	506		AR	II	2482.2239	2481.4746	90	.	867	
AR	II	2447.096	2446.355	10	.	506		AR	II	2482.8999	2482.1504	90	18.	867	
AR	II	2448.484	2447.743	20	.	506		AR	II	2483.975	2483.225	20	.	506	
AR	II	2448.90	2448.16	0	.	506		AR	II	2487.656	2486.906	30	.	506	
AR	II	2449.9237	2449.1819	20	.	867		AR	II	2491.7861	2491.0346	90	.	867	
AR	II	2450.149	2449.407	20	.	506		AR	II	2492.765	2492.013	30	.	506	
AR	II	2451.283	2450.541	10	.	506		AR	II	2494.866	2494.114	40	.	506	
AR	II	2451.779	2451.037	10	.	506		AR	II	2496.168	2495.415	5	.	506	
AR	II	2453.486	2452.743	20	.	506		AR	II	2496.6772	2495.9245	20	.	867	
AR	II	2455.013	2454.270	80	.	506		AR	II	2497.9753	2497.2223	60	.	867	
AR	II	2455.823	2455.080	50	.	506		AR	II	2500.2798	2499.5263	60	.	867	
AR	II	2455.978	2455.235	10	.	506		AR	II	2501.151	2500.397	50	.	506	
AR	II	2456.371	2455.628	10	.	506		AR	II	2502.5902	2501.8362	80	.	867	
AR	II	2457.010	2456.266	20	.	506		AR	II	2504.6892	2503.9347	70	.	867	
AR	II	2457.36	2456.61	10	.	506		AR	II	2505.493	2504.738	30	.	506	
AR	II	2458.269	2457.525	10	.	506		AR	II	2508.088	2507.333	30	.	506	
AR	II	2458.698	2457.954	20	.	506		AR	II	2509.304	2508.548	10	.	506	
AR	II	2460.345	2459.601	10	.	506		AR	II	2511.3824	2510.6263	30	.	867	
AR	II	2460.6968	2459.9525	70	.	867		AR	II	2513.0141	2512.2576	60	.	867	
AR	II	2461.379	2460.635	20	.	506		AR	II	2516.029	2515.272	30	.	506	
AR	II	2461.948	2461.203	10	.	506		AR	II	2516.3508	2515.5935	90	.	867	
AR	II	2463.298	2462.553	10	.	506		AR	II	2516.590	2515.833	5	.	506	
AR	II	2463.743	2462.998	20	.	506		AR	II	2517.5462	2516.7887	130	.	867	
AR	II	2466.86	2466.12	10	.	506		AR	II	2523.2574	2522.4985	90	.	867	
AR	II	2467.594	2466.848	10	.	506		AR	II	2526.239	2525.479	40	.	506	
AR	II	2468.29	2467.55	0	.	506		AR	II	2526.836	2526.076	20	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
AR	II	2529.078	2528.318	40	.	506		AR	II	2617.5929	2616.8118	30	.	867	
AR	II	2529.439	2528.679	30	.	506		AR	II	2618.377	2617.596	20	.	506	
AR	II	2531.184	2530.423	10	.	506		AR	II	2621.767	2620.985	40	.	506	
AR	II	2535.4705	2534.7088	130	18.	867		AR	II	2622.661	2621.879	10	.	506	
AR	II	2536.012	2535.250	30	.	506		AR	II	2623.873	2623.090	10	.	506	
AR	II	2536.520	2535.758	10	.	506		AR	II	2625.376	2624.593	30	.	506	
AR	II	2536.7770	2536.0150	120	.	867		AR	II	2626.495	2625.711	10	.	506	
AR	II	2537.922	2537.160	10	.	506		AR	II	2628.181	2627.397	30	.	506	
AR	II	2538.350	2537.588	10	.	506		AR	II	2634.786	2634.001	20	.	506	
AR	II	2540.800	2540.037	30	.	506		AR	II	2637.1444	2636.3586	20	.	867	
AR	II	2542.36	2541.59	5	.	506		AR	II	2637.6976	2636.9117	30	.	867	
AR	II	2545.4482	2544.6841	120	.	867		AR	II	2644.52	2643.74	10	.	506	
AR	II	2546.406	2545.642	30	.	506		AR	II	2648.035	2647.247	60	.	506	
AR	II	2547.630	2546.866	20	.	506		AR	II	2648.632	2647.844	10	.	506	
AR	II	2547.9377	2547.1730	30	.	867		AR	II	2650.3903	2649.6014	40	.	867	
AR	II	2550.5524	2549.7872	60	.	867		AR	II	2652.695	2651.906	20	.	506	
AR	II	2552.337	2551.571	10	.	506		AR	II	2653.689	2652.899	10	.	506	
AR	II	2554.1661	2553.4000	20	.	867		AR	II	2654.00	2653.21	0	.	506	
AR	II	2557.353	2556.586	40	.	506		AR	II	2654.846	2654.056	20	.	506	
AR	II	2559.367	2558.600	5	.	506		AR	II	2657.094	2656.303	20	.	506	
AR	II	2560.049	2559.281	30	.	506		AR	II	2658.68	2657.89	0	.	506	
AR	II	2561.621	2560.853	10	.	506		AR	II	2671.02	2670.22	5	.	506	
AR	II	2562.722	2561.954	10	.	506		AR	II	2674.965	2674.170	20	.	506	
AR	II	2562.8547	2562.0866	140	.	867		AR	II	2683.891	2683.094	30	.	506	
AR	II	2565.1852	2564.4165	70	.	867		AR	II	2687.1207	2686.3230	30	.	867	
AR	II	2566.5540	2565.7850	30	.	867		AR	II	2687.73	2686.94	10	.	506	
AR	II	2567.864	2567.095	10	.	506		AR	II	2688.193	2687.395	10	.	506	
AR	II	2568.496	2567.727	10	.	506		AR	II	2689.891	2689.093	20	.	506	
AR	II	2569.972	2569.202	40	.	506		AR	II	2690.8240	2690.0254	20	.	867	
AR	II	2570.754	2569.984	30	.	506		AR	II	2692.95	2692.15	5	.	506	
AR	II	2571.1809	2570.4108	80	.	867		AR	II	2693.3938	2692.5945	100	.	867	
AR	II	2574.711	2573.940	5	.	506		AR	II	2698.174	2697.374	10	.	506	
AR	II	2580.200	2579.428	20	.	506		AR	II	2702.520	2701.719	20	.	506	
AR	II	2581.132	2580.360	10	.	506		AR	II	2708.855	2708.052	20	.	506	
AR	II	2592.471	2591.696	10	.	506		AR	II	2709.075	2708.272	60	.	506	
AR	II	2592.849	2592.074	10	.	506		AR	II	2717.665	2716.860	20	.	506	
AR	II	2592.953	2592.178	10	.	506		AR	II	2720.990	2720.184	20	.	506	
AR	II	2601.7373	2600.9599	30	.	867		AR	II	2722.386	2721.580	5	.	506	
AR	II	2606.763	2605.985	10	.	506		AR	II	2731.31	2730.50	5	.	506	
AR	II	2610.46	2609.68	0	.	506		AR	II	2731.48	2730.67	5	.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	2732.448	2731.639	10	.	506		AR	II	2858.117	2857.278	5	.	506	
AR	II	2733.144	2732.335	10	.	506		AR	II	2861.582	2860.742	30	.	506	
AR	II	2733.3109	2732.5020	90	.	867		AR	II	2865.434	2864.593	5	.	506	
AR	II	2733.831	2733.022	40	.	506		AR	II	2866.6846	2865.8432	40	.	867	
AR	II	2734.618	2733.809	10	.	506		AR	II	2870.125	2869.283	10	.	506	
AR	II	2741.144	2740.333	10	.	506		AR	II	2871.383	2870.540	10	.	506	
AR	II	2741.723	2740.912	10	.	506		AR	II	2871.865	2871.022	10	.	506	
AR	II	2741.878	2741.067	20	.	506		AR	II	2872.242	2871.399	10	.	506	
AR	II	2741.8788	2741.0679	50	.	867		AR	II	2875.4255	2874.5819	40	.	867	
AR	II	2742.773	2741.962	10	.	506		AR	II	2877.733	2876.889	5	.	506	
AR	II	2745.609	2744.797	60	.	506		AR	II	2880.172	2879.327	40	.	506	
AR	II	2745.80	2744.98	10	.	506		AR	II	2888.378	2887.531	20	.	506	
AR	II	2749.145	2748.332	10	.	506		AR	II	2892.40J2	2891.6125	160	15.	867	
AR	II	2755.6818	2754.8675	20	.	867		AR	II	2894.833	2893.985	10	.	506	
AR	II	2758.119	2757.304	30	.	506		AR	II	2897.4092	2896.5602	20	.	867	
AR	II	2762.14	2761.33	5	.	506		AR	II	2897.5954	2896.7463	100	.	867	
AR	II	2764.336	2763.520	10	.	506		AR	II	2898.181	2897.332	60	.	506	
AR	II	2765.4628	2764.6461	60	17.	867		AR	II	2905.686	2904.835	0	.	506	
AR	II	2768.762	2767.945	20	.	506		AR	II	2907.89	2907.04	0	.	506	
AR	II	2769.86	2769.04	0	.	506		AR	II	2915.785	2914.932	10	.	506	
AR	II	2770.5566	2769.7387	80	.	867		AR	II	2916.447	2915.593	40	.	506	
AR	II	2770.73	2769.91	5	.	506		AR	II	2916.821	2915.967	10	.	506	
AR	II	2771.256	2770.438	5	.	506		AR	II	2925.498	2924.642	100	.	506	
AR	II	2772.73	2771.91	5	.	506		AR	II	2932.3385	2931.4809	90	.	867	
AR	II	2773.559	2772.740	20	.	506		AR	II	2933.4482	2932.5903	60	16.	867	
AR	II	2774.918	2774.099	20	.	506		AR	II	2936.397	2935.538	30	.	506	
AR	II	2779.06	2778.24	0	.	506		AR	II	2939.77	2938.90	10	.	506	
AR	II	2796.113	2795.289	20	.	506		AR	II	2942.753	2941.893	10	.	506	
AR	II	2796.249	2795.425	20	.	506		AR	II	2943.7538	2942.8933	220	15.	867	
AR	II	2801.744	2800.919	10	.	506		AR	II	2948.137	2947.275	20	.	506	
AR	II	2806.817	2805.990	10	17.	506		AR	II	2948.981	2948.119	5	.	506	
AR	II	2808.9940	2806.1672	80	17.	867		AR	II	2956.2520	2955.3884	120	.	867	
AR	II	2829.10	2828.27	0	.	506		AR	II	2957.405	2956.541	40	.	506	
AR	II	2831.667	2830.834	5	.	506		AR	II	2958.396	2957.532	30	.	506	
AR	II	2840.305	2839.470	10	.	506		AR	II	2961.125	2960.260	50	.	506	
AR	II	2844.205	2843.369	30	.	506		AR	II	2961.379	2960.514	5	.	506	
AR	II	2844.9649	2844.1289	30	16.	867		AR	II	2979.9197	2979.0503	200	15.	867	
AR	II	2847.983	2847.146	20	.	506		AR	II	2991.715	2990.843	20	.	506	
AR	II	2848.6565	2847.8195	30	16.	867		AR	II	2999.985	2999.110	20	.	506	
AR	II	2854.00	2853.16	0	.	506		AR	II	3000.983	3000.110	50	72.	506	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
AR	II	3001.3198	3000.4450	110	72.	867		AR	II	3115.20	3114.29	5	.	506	
AR	II	3003.836	3002.961	60	.	506		AR	II	3115.2848	3114.3815	50	.	867	
AR	II	3005.362	3004.486	20	.	506		AR	II	3125.174	3124.268	10	.	506	
AR	II	3015.3604	3014.4822	80	72.	867		AR	II	3137.390	3136.481	30	.	506	
AR	II	3027.626	3026.745	50	120.	506		AR	II	3138.5419	3137.6328	50	71.	867	
AR	II	3029.603	3028.721	30	84.	506		AR	II	3139.9271	3139.0176	140	47.	867	
AR	II	3029.7956	3028.9137	140	84.	867		AR	II	3140.167	3139.257	40	.	506	
AR	II	3034.3913	3033.5083	180	15.	867		AR	II	3141.873	3140.963	20	.	506	
AR	II	3037.771	3036.887	20	.	506		AR	II	3144.802	3143.891	30	.	506	
AR	II	3043.348	3042.463	10	.	506		AR	II	3146.811	3145.900	20	.	506	
AR	II	3046.965	3046.079	50	.	506		AR	II	3147.3377	3146.4264	40	49.	867	
AR	II	3047.939	3047.053	5	.	506		AR	II	3149.114	3148.202	50	.	506	
AR	II	3048.908	3048.021	20	.	506		AR	II	3151.422	3150.510	40	.	506	
AR	II	3049.671	3048.784	20	.	506		AR	II	3153.526	3152.613	30	.	506	
AR	II	3050.930	3050.043	10	.	506		AR	II	3154.695	3153.782	40	118.	506	
AR	II	3054.039	3053.151	50	.	506		AR	II	3154.860	3153.947	5	.	506	
AR	II	3056.169	3055.281	5	.	506		AR	II	3155.202	3154.289	20	.	506	
AR	II	3061.7955	3060.9057	110	.	867		AR	II	3159.122	3158.208	5	.	506	
AR	II	3063.533	3062.643	30	.	506		AR	II	3162.2877	3161.3726	130	97.	867	
AR	II	3066.011	3065.120	30	.	506		AR	II	3162.371	3161.456	80	.	506	
AR	II	3066.291	3065.400	5	.	506		AR	II	3164.451	3163.535	20	118.	506	
AR	II	3067.005	3066.114	5	.	506		AR	II	3166.204	3165.288	60	.	506	
AR	II	3067.780	3066.889	60	.	506		AR	II	3168.381	3167.464	30	.	506	
AR	II	3072.553	3071.660	5	.	506		AR	II	3170.5856	3169.6685	140	47.	867	
AR	II	3083.874	3082.979	50	120.	506		AR	II	3172.321	3171.403	30	.	506	
AR	II	3084.089	3083.193	10	.	506		AR	II	3173.7794	3172.8614	40	.	867	
AR	II	3085.922	3085.026	50	118.	506		AR	II	3181.9576	3181.0376	130	47.	867	
AR	II	3089.106	3088.209	70	119.	506		AR	II	3185.189	3184.268	10	.	506	
AR	II	3089.807	3088.910	30	.	506		AR	II	3186.685	3185.734	30	.	506	
AR	II	3094.2999	3093.4019	180	84.	867		AR	II	3187.090	3186.169	50	48.	506	
AR	II	3095.858	3094.960	40	118.	506		AR	II	3189.291	3188.369	10	48.	506	
AR	II	3100.758	3099.858	10	.	506		AR	II	3192.87	3191.95	5	.	506	
AR	II	3100.823	3099.923	50	.	506		AR	II	3193.286	3192.363	30	.	506	
AR	II	3101.9089	3101.0090	20	.	867		AR	II	3194.435	3193.512	10	.	506	
AR	II	3103.485	3102.585	40	.	506		AR	II	3195.1541	3194.2307	80	46.	867	
AR	II	3103.853	3102.953	10	.	506		AR	II	3195.521	3194.598	40	.	506	
AR	II	3105.260	3104.359	50	119.	506		AR	II	3196.498	3195.574	20	.	506	
AR	II	3109.7071	3108.8052	20	18.	867		AR	II	3196.676	3195.752	50	.	506	
AR	II	3110.613	3109.711	40	.	506		AR	II	3199.844	3198.920	20	.	506	
AR	II	3110.88	3109.98	5	.	506		AR	II	3204.3190	3203.3933	30	.	867	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	II	3321.3280	3320.3726	20	.	867	
AR	II	3342.7017	3341.7409	40	.	867	
AR	II	3351.8875	3350.9243	160	.	867	
AR	II	3362.7108	3361.7448	50	.	867	
AR	II	3366.4876	3365.5207	80	.	867	
AR	II	3367.5473	3366.5801	90	.	867	
AR	II	3374.8137	3373.8447	30	.	867	
AR	II	3377.4056	3376.4359	160	.	867	
AR	II	3380.4308	3379.4604	40	.	867	
AR	II	3380.5479	3379.5774	40	.	867	
AR	II	3389.5037	3388.5309	160	.	867	
AR	II	3398.8709	3397.8958	60	.	867	
AR	III	2139.27	2138.59	100		79	
AR	III	2149.06	2148.38	50		79	
AR	III	2158.22	2157.53	30		79	
AR	III	2166.82	2166.14	70		337	
AR	III	2170.88	2170.20	90		337	
AR	III	2177.90	2177.22	100		337	
AR	III	2242.98	2242.29	60	10.	488	
AR	III	2282.91	2282.21	70	10.	488	
AR	III	2289.53	2288.82	20		79	
AR	III	2290.02	2289.31	40		79	
AR	III	2291.32	2290.61	60		79	
AR	III	2292.96	2292.25	40		79	
AR	III	2294.76	2294.05	30		79	
AR	III	2295.62	2294.91	50		79	
AR	III	2296.95	2296.24	40		79	
AR	III	2301.46	2300.75	80		337	
AR	III	2302.78	2302.07	100		337	
AR	III	2303.55	2302.84	20		337	
AR	III	2345.89	2345.17	90	10.	488	
AR	III	2411.71	2410.98	10		337	
AR	III	2411.82	2411.09	20		337	
AR	III	2411.90	2411.17	0		337	
AR	III	2416.48	2415.75	60		337	
AR	III	2416.68	2415.95	30		337	
AR	III	2416.78	2416.05	0		337	
AR	III	2424.81	2424.07	120		337	
AR	III	2425.14	2424.40	20		337	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	III	2425.37	2424.63	0		337	
AR	III	2484.86	2484.11	60	8.	488	
AR	III	2509.66	2508.91	30	8.	488	
AR	III	2534.68	2533.92	30	8.	488	
AR	III	2584.16	2583.39	30		79	
AR	III	2602.90	2602.12	10		79	
AR	III	2618.04	2617.26	10		79	
AR	III	2632.68	2631.90	70	9.	488	
AR	III	2679.17	2678.38	90	9.	488	
AR	III	2725.65	2724.84	100	9.	488	
AR	III	2784.47	2783.65	50		79	
AR	III	2786.05	2785.23	50		79	
AR	III	2807.85	2807.02	40		79	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AR	III	2819.09	2818.26	60		79	
AR	III	2825.49	2824.66	60		79	
AR	III	3006.10	3005.23			108	F
AR	III	3010.90	3010.02	100		79	
AR	III	3024.93	3024.05	120	4.	79	
AR	III	3028.04	3027.16	50	4.	79	
AR	III	3028.04	3027.16	50	4.	79	
AR	III	3037.84	3036.96	30		79	
AR	III	3055.70	3054.82	120	4.	79	
AR	III	3065.66	3064.77	100	4.	79	
AR	III	3079.05	3078.15	100	4.	79	
AR	III	3084.53	3083.64	30		79	
AR	III	3110.00	3109.16			108	F
AR	III	3111.31	3110.41	70		79	
AR	III	3128.80	3127.90	70		79	
AR	III	3158.33	3157.42	50		79	
AR	III	3172.56	3171.64	20		79	
AR	III	3188.80	3187.90	60		79	
AR	III	3286.80	3285.85	250	1.	1015	
AR	III	3302.83	3301.88	200	1.	1015	
AR	III	3312.20	3311.25	150	1.	1015	
AR	III	3324.55	3323.59	90		79	
AR	III	3328.30	3327.34	40		79	
AR	III	3337.09	3336.13	250	3.	1015	
AR	III	3345.68	3344.72	200	3.	1015	
AR	III	3359.45	3358.49	150	3.	1015	
AR	III	3392.82	3391.85	150	6.	79	
AR	III	3414.51	3413.53	60		79	
AR	III	3418.46	3417.49	70		79	
AR	III	3425.23	3424.25	90	6.	79	
AR	III	3431.01	3430.03	20		79	
AR	III	3439.03	3438.04	80	6.	79	
AR	III	3472.31	3471.32	90	6.	79	
AR	III	3481.55	3480.55	200	2.	1015	
AR	III	3485.11	3484.12	30		79	
AR	III	3498.09	3497.10	40		79	
AR	III	3499.31	3498.31	60	6.	79	
AR	III	3500.67	3499.67	120	2.	1015	
AR	III	3504.58	3503.58	150	2.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
AS	II	2236.069	2235.375	0		425	
AS	II	2277.316	2276.613	0		425	
AS	II	2277.673	2276.970	30		425	
AS	II	2289.489	2288.784	5		425	
AS	II	2301.164	2300.456	0		425	
AS	II	2305.554	2304.845	0		425	
AS	II	2320.713	2320.000	0		425	
AS	II	2321.718	2321.005	0		425	
AS	II	2321.962	2321.249	10		425	
AS	II	2323.258	2322.545	5		425	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
AS	II	2326.888	2326.174	50		425		AS	II	2471.100	2470.353	150		425	
AS	II	2342.579	2341.862	0		425		AS	II	2472.821	2472.074	0		425	
AS	II	2343.474	2342.757	1		425		AS	II	2472.876	2472.129	0		425	
AS	II	2344.415	2343.697	3		425		AS	II	2475.074	2474.327	2		425	
AS	II	2345.719	2345.000	0		425		AS	II	2479.597	2478.848	5		425	
AS	II	2347.925	2347.206	0		425		AS	II	2481.162	2480.413	1		425	
AS	II	2353.126	2352.406	3		425		AS	II	2482.530	2481.781	1		425	
AS	II	2356.9747	2356.2539	5		425		AS	II	2488.418	2487.667	15		425	
AS	II	2359.095	2358.373	0		425		AS	II	2490.934	2490.183	150		425	
AS	II	2361.624	2360.902	0		425		AS	II	2491.246	2490.495	170		425	
AS	II	2362.441	2361.719	125		425		AS	II	2496.160	2495.407	1		425	
AS	II	2362.805	2362.083	1		425		AS	II	2496.992	2496.240	1		425	
AS	II	2365.563	2364.783	0		425		AS	II	2498.939	2498.186	25		425	
AS	II	2366.568	2365.845	5		425		AS	II	2499.226	2498.473	5		425	
AS	II	2372.718	2371.994	10		425		AS	II	2499.403	2498.650	25		425	
AS	II	2374.869	2374.144	3		425		AS	II	2500.860	2500.107	1		425	
AS	II	2379.574	2378.849	3		425		AS	II	2502.315	2501.560	15		425	
AS	II	2384.782	2384.054	30		425		AS	II	2503.084	2502.329	3		425	
AS	II	2390.4030	2389.6747	25		425		AS	II	2504.665	2503.911	5		425	
AS	II	2394.416	2393.687	1		425		AS	II	2506.778	2506.023	0		425	
AS	II	2401.162	2400.431	0		425		AS	II	2507.682	2506.927	3		425	
AS	II	2405.938	2405.206	2		425		AS	II	2508.818	2508.063	25		425	
AS	II	2406.6021	2405.8702	150		425		AS	II	2509.357	2508.601	5		425	
AS	II	2411.838	2411.105	15		425		AS	II	2512.144	2511.388	2		425	
AS	II	2422.425	2421.689	1		425		AS	II	2514.249	2513.492	5		425	
AS	II	2422.676	2421.940	1		425		AS	II	2518.632	2517.874	20		425	
AS	II	2428.150	2427.414	1		425		AS	II	2520.320	2519.562	2		425	
AS	II	2435.295	2434.557	20		425		AS	II	2528.297	2527.537	320		425	
AS	II	2436.7001	2435.9614	210		425		AS	II	2528.618	2527.858	5		425	
AS	II	2439.751	2439.011	1		425		AS	II	2529.892	2529.132	2		425	
AS	II	2445.907	2445.166	2		425		AS	II	2531.778	2531.017	2		425	
AS	II	2447.632	2446.890	5		425		AS	II	2532.079	2531.318	5		425	
AS	II	2459.181	2458.437	0		425		AS	II	2533.896	2533.134	30		425	
AS	II	2459.581	2458.837	2		425		AS	II	2538.467	2537.705	50		425	
AS	II	2460.979	2460.235	50		425		AS	II	2540.2467	2539.4839	10		425	
AS	II	2462.430	2461.685	170		425		AS	II	2556.469	2555.702	3		425	
AS	II	2462.871	2462.126	2		425		AS	II	2558.850	2558.082	2		425	
AS	II	2464.739	2463.993	150		425		AS	II	2559.663	2558.895	2		425	
AS	II	2465.4834	2464.7380	170		425		AS	II	2560.315	2559.548	15		425	
AS	II	2466.348	2465.602	125		425		AS	II	2561.872	2561.105	170		425	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AS	II	2564.331	2563.563	2		425		AS	II	2689.601	2688.803	50		425	
AS	II	2565.672	2564.903	50		425		AS	II	2690.820	2690.022	10		425	
AS	II	2567.753	2566.984	5		425		AS	II	2699.173	2698.372	1		425	
AS	II	2570.685	2569.915	0		425		AS	II	2702.158	2701.357	30		425	
AS	II	2573.957	2573.186	170		425		AS	II	2703.512	2702.711	100		425	
AS	II	2576.9293	2576.1579	50		425		AS	II	2712.705	2711.901	0		425	
AS	II	2582.703	2581.931	5		425		AS	II	2714.740	2713.936	30		425	
AS	II	2589.449	2588.675	10		425		AS	II	2716.838	2716.034	5		425	
AS	II	2590.815	2590.040	10		425		AS	II	2718.038	2717.232	2		425	
AS	II	2591.207	2590.432	10		425		AS	II	2733.139	2732.330	0		425	
AS	II	2591.797	2591.022	4		425		AS	II	2735.803	2734.993	0		425	
AS	II	2595.764	2594.988	170		425		AS	II	2738.293	2737.483	0		425	
AS	II	2596.431	2595.655	0		425		AS	II	2742.393	2741.582	150		425	
AS	II	2599.454	2598.678	170		425		AS	II	2745.941	2745.129	5		425	
AS	II	2602.773	2601.995	400		425		AS	II	2746.086	2745.274	170		425	
AS	II	2603.225	2602.448	100		425		AS	II	2748.820	2748.007	10		425	
AS	II	2603.966	2603.188	10		425		AS	II	2755.067	2754.253	0		425	
AS	II	2606.114	2605.336	0		425		AS	II	2755.856	2755.041	1		425	
AS	II	2609.351	2608.572	30		425		AS	II	2761.650	2760.834	3		425	
AS	II	2610.423	2609.644	0		425		AS	II	2768.801	2767.983	40		425	
AS	II	2610.691	2609.912	5		425		AS	II	2779.269	2778.448	0		425	
AS	II	2610.842	2610.062	5		425		AS	II	2783.482	2782.611	20		425	
AS	II	2614.184	2613.404	0		425		AS	II	2791.0298	2790.2070	50		425	
AS	II	2616.296	2615.515	2		425		AS	II	2791.4222	2790.5992	150		425	
AS	II	2630.060	2629.276	0		425		AS	II	2801.367	2800.542	10		425	
AS	II	2633.422	2632.637	1		425		AS	II	2823.6092	2822.7783	1		425	
AS	II	2633.820	2633.035	1		425		AS	II	2829.6336	2828.8013	170		425	
AS	II	2634.661	2633.876	5		425		AS	II	2830.101	2829.268	5		425	
AS	II	2634.893	2634.107	10		425		AS	II	2831.1918	2830.3591	340		425	
AS	II	2636.386	2635.600	1		425		AS	II	2831.9972	2831.1643	340		425	
AS	II	2637.113	2636.327	3		425		AS	II	2835.202	2834.369	5		425	
AS	II	2638.476	2637.690	10		425		AS	II	2835.712	2834.878	100		425	
AS	II	2645.916	2645.128	10		425		AS	II	2846.239	2845.402	0		425	
AS	II	2648.670	2647.881	0		425		AS	II	2846.774	2845.937	50		425	
AS	II	2649.162	2648.373	0		425		AS	II	2848.3080	2847.4710	80		425	
AS	II	2654.351	2653.561	5		425		AS	II	2848.7181	2847.8811	50		425	
AS	II	2656.628	2655.838	0		425		AS	II	2850.457	2849.619	0		425	
AS	II	2663.778	2662.986	5		425		AS	II	2850.565	2849.727	2		425	
AS	II	2668.426	2667.633	1		425		AS	II	2854.555	2853.717	5		425	
AS	II	2679.854	2679.058	2		425		AS	II	2856.275	2855.436	50		425	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AS	II	2856.871	2856.032	1		425		AS	II	2972.181	2971.313	150		425	
AS	II	2860.112	2859.272	0		425		AS	II	2973.734	2972.867	0		425	
AS	II	2861.039	2860.199	5		425		AS	II	2980.1190	2979.2496	30		425	
AS	II	2867.291	2866.449	5		425		AS	II	2997.685	2996.811	50		425	
AS	II	2878.3913	2877.5470	125		425		AS	II	2999.337	2998.463	1		425	
AS	II	2879.184	2878.340	5		425		AS	II	3000.174	2999.299	50		425	
AS	II	2879.877	2879.033	1		425		AS	II	3004.6947	3003.8192	340		425	
AS	II	2881.2211	2880.3761	125		425		AS	II	3008.177	3007.300	50		425	
AS	II	2884.666	2883.820	0		425		AS	II	3010.628	3009.751	5		425	
AS	II	2885.2520	2884.4060	340		425		AS	II	3010.917	3010.040	30		425	
AS	II	2888.032	2887.186	30		425		AS	II	3011.245	3010.368	100		425	
AS	II	2890.9874	2890.1400	310		425		AS	II	3012.623	3011.745	30		425	
AS	II	2893.443	2892.595	10		425		AS	II	3014.596	3013.718	60		425	
AS	II	2895.855	2895.007	8		425		AS	II	3017.4201	3016.5414	60		425	
AS	II	2902.951	2902.100	15		425		AS	II	3022.159	3021.279	0		425	
AS	II	2904.807	2903.955	10		425		AS	II	3026.114	3025.233	1		425	
AS	II	2906.390	2905.539	5		425		AS	II	3027.630	3026.748	0		425	
AS	II	2907.436	2906.584	1		425		AS	II	3037.091	3036.208	1		425	
AS	II	2911.460	2910.607	100		425		AS	II	3040.519	3039.634	0		425	
AS	II	2911.9095	2911.0569	100		425		AS	II	3045.812	3044.926	2		425	
AS	II	2912.720	2911.867	20		425		AS	II	3045.982	3045.096	50		425	
AS	II	2914.362	2913.508	2		425		AS	II	3048.725	3047.838	1		425	
AS	II	2917.875	2917.021	190		425		AS	II	3049.156	3048.270	150		425	
AS	II	2918.211	2917.357	125		425		AS	II	3053.960	3053.072	25		425	
AS	II	2920.584	2919.729	1		425		AS	II	3054.250	3053.362	310		425	
AS	II	2922.762	2921.907	100		425		AS	II	3054.6085	3053.7204	40		425	
AS	II	2926.689	2925.833	2		425		AS	II	3058.8341	3057.9450	310		425	
AS	II	2928.976	2928.119	20		425		AS	II	3061.817	3060.928	0		425	
AS	II	2938.4441	2937.5849	280		425		AS	II	3063.444	3062.554	30		425	
AS	II	2941.109	2940.249	30		425		AS	II	3064.360	3063.469	0		425	
AS	II	2943.8039	2942.9434	100		425		AS	II	3070.699	3069.807	20		425	
AS	II	2945.815	2944.954	125		425		AS	II	3071.962	3071.070	30		425	
AS	II	2946.112	2945.251	125		425		AS	II	3074.708	3073.915	30		425	
AS	II	2953.140	2952.278	190		425		AS	II	3074.933	3074.040	5		425	
AS	II	2960.4368	2959.5722	750		425		AS	II	3076.521	3075.627	5		425	
AS	II	2962.477	2961.611	100		425		AS	II	3080.253	3079.358	170		425	
AS	II	2964.6487	2963.7831	125		425		AS	II	3086.558	3085.662	0		425	
AS	II	2969.111	2968.243	40		425		AS	II	3089.959	3089.062	2		425	
AS	II	2970.752	2969.885	30		425		AS	II	3090.840	3089.943	0		425	
AS	II	2970.964	2970.097	50		425		AS	II	3091.024	3090.127	2		425	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
AS	II	3091.436	3090.539	0		425		AS	II	3278.258	3277.313	2		425	
AS	II	3091.9615	3091.0641	50		425		AS	II	3283.9325	3282.9866	100		425	
AS	II	3093.742	3092.844	80		425		AS	II	3283.9625	3283.0166	20		425	
AS	II	3094.487	3093.589	10		425		AS	II	3288.429	3287.481	20		425	
AS	II	3099.208	3098.309	0		425		AS	II	3288.613	3287.666	2		425	
AS	II	3099.5199	3098.6206	100		425		AS	II	3320.164	3319.210	125		425	
AS	II	3100.184	3099.285	0		425		AS	II	3323.666	3322.710	100		425	
AS	II	3101.346	3100.447	1		425		AS	II	3339.626	3338.666	2		425	
AS	II	3103.209	3102.309	0		425		AS	II	3367.7939	3366.8267	125		425	
AS	II	3111.016	3110.114	0		425									
AS	II	3113.500	3112.596	40		425		AS	III	2053.97	2053.31	2		404	
AS	II	3114.397	3113.494	5		425		AS	III	2134.56	2133.89	2		404	
AS	II	3117.4201	3116.5163	340		425		AS	III	2144.80	2144.13	20		404	
AS	II	3117.630	3116.726	40		425		AS	III	2148.27	2147.59	30		404	
AS	II	3117.952	3117.048	1		425		AS	III	2152.26	2151.58	20		404	
AS	II	3119.370	3118.466	10		425		AS	III	2152.86	2152.18	20		575	
AS	II	3121.095	3120.190	10		425		AS	III	2166.96	2166.28	5		404	
AS	II	3122.982	3122.076	80		425		AS	III	2169.51	2168.83	10		575	
AS	II	3127.7674	3126.8610	100		425		AS	III	2927.17	2926.32	110		404	
AS	II	3128.678	3127.772	0		425		AS	III	2982.87	2982.00	250		404	
AS	II	3132.596	3131.687	0		425		AS	III	2990.41	2989.54	5		404	
AS	II	3140.908	3139.998	1		425		AS	III	3181.70	3180.78	30		404	
AS	II	3147.181	3146.269	0		425		AS	III	3256.63	3255.69	70		404	
AS	II	3158.7406	3157.8264	80		425									
AS	II	3163.523	3162.608	150		425		AS	IV	2098.07	2097.40	100		584	
AS	II	3164.440	3163.524	0		425		AS	IV	2109.33	2108.66	150		584	
AS	II	3167.1021	3166.1857	100		425		AS	IV	2143.21	2142.53	150		584	
AS	II	3168.066	3167.150	1		425		AS	IV	2146.38	2145.70	250		584	
AS	II	3171.596	3170.678	5		425		AS	IV	2189.97	2189.29	1		584	
AS	II	3173.225	3172.308	1		425									
AS	II	3175.846	3174.928	80		425		AS	IV	2253.81	2253.11	600		584	
AS	II	3176.508	3175.587	2		425		AS	IV	2263.87	2263.17	800		584	
AS	II	3183.305	3182.385	2		425		AS	IV	2266.83	2266.13	250		584	
AS	II	3196.9527	3196.0289	50		425		AS	IV	2268.76	2268.06	150		584	
AS	II	3197.173	3196.249	5		425		AS	IV	2277.60	2276.90	100		584	
AS	II	3226.2480	3225.3167	5		425		AS	IV	2301.75	2301.04	800		584	
AS	II	3237.7543	3236.8200	1		425		AS	IV	2301.86	2301.15	50		584	
AS	II	3243.738	3242.860	2		425		AS	IV	2306.56	2305.88	250		584	
AS	II	3245.142	3244.206	50		425		AS	IV	2308.90	2308.19	100		584	
AS	II	3257.324	3256.385	2		425		AS	IV	2309.69	2308.99	10		584	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
AS	IV	2362.50	2361.78	50		584		B	II	2678.20	2677.40			211	H
AS	IV	2398.77	2398.04	50		584		B	II	2709.796	2708.993	50		532	
AS	IV	2403.88	2403.15	100		584		B	II	2918.930	2918.076	350		532	
AS	IV	2406.46	2405.73	350		584		B	II	3033.140	3032.258	250		532	
AS	IV	2406.77	2406.04	50		584		B	II	3180.251	3179.331	150		532	
AS	IV	2407.27	2406.54	50		584		B	II	3223.01	3222.08	A		532	
AS	IV	2418.26	2417.53	1000		584		B	II	3225.18	3224.25	A		532	
AS	IV	2446.80	2446.06	600		584		B	II	3226.20	3225.27	A		532	
AS	IV	2454.77	2454.03	1000		584		B	II	3303.39	3302.44	10		532	
AS	IV	2462.17	2461.43	800		584		B	II	3324.134	3323.178	250		532	
AS	IV	2464.75	2464.00	100		584		B	II	3324.553	3323.597	250		532	
AS	IV	2512.94	2512.18	350		584		B	II	3452.279	3451.291	1000	1.	532	
AS	IV	2948.80	2947.94	10		584									
AS	IV	3109.70	3108.81	600		584									
AS	IV	3190.86	3189.94	350		584		B	III	2066.436	2065.776	850		531	
								B	III	2067.893	2067.233	700		531	
								B	III	2077.749	2077.087	250		531	
AS	IV	3217.07	3216.14	150		584		B	III	2138.502	2137.830	110		531	
								B	III	2234.782	2234.088	65		531	
B	I	2067.036	2066.377	250		274									
B	I	2067.312	2066.654	250		274		B	III	2235.287	2234.593	110		531	
B	I	2067.589	2066.930	100		274		B	III	2805.610	2804.780	1		531	
B	I	2067.68	2067.02	10		1021		B	III	2910.940	2910.090	10		531	
B	I	2067.852	2067.193	300		274		B	III	2915.560	2914.710	10		531	
B	I	2089.573	2088.910	500	2.	274		B	IV	2257.0	2256.2	10		221	
B	I	2090.237	2089.573	500	2.	274		B	IV	2415.0	2414.3	20		221	
B	I	2497.526	2496.773	1000	1.	274		B	IV	2525.5	2524.7	40		221	
B	I	2498.484	2497.731	1000	1.	274		B	IV	2531.1	2530.3	60		221	
								B	IV	2822.51	2821.66	100		221	
B	II	2006.3	2005.7	A		532									
B	II	2015.	2014.			126		B	IV	2825.39	2824.56	40		221	
B	II	2126.	2125.			392		B	IV	2826.68	2825.87	80		221	
B	II	2220.989	2220.298	150		532									
B	II	2267.02	2266.32	4		168		B	V	2050.34	2049.68			309	
								B	V	2283.36	2282.66			309	
B	II	2267.63	2266.93	4		168		B	V	2361.99	2361.27			309	
B	II	2323.745	2323.031	100		532		B	V	2381.46	2380.73			309	
B	II	2329.383	2328.668	100		532		B	V	2515.42	2514.66			309	
B	II	2393.933	2393.204	100		532									
B	II	2395.777	2395.048	500	4.	532		B	V	2707.34	2706.54			309	
								B	V	2982.23	2981.36			309	
								B	V	2999.36	2998.48			309	
								B	V	3001.63	3000.76			309	
B	II	2426.007	2425.271	50		532									
B	II	2460.434	2459.690	100		532									
B	II	2460.639	2459.895	100		532									
B	II	2520.015	2519.257	50		532									
B	II	2670.292	2669.498	50		532									

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
BE	II	2274.2	2273.5			862		BR	I	3326.264	3325.307	10		757	
BE	II	2325.3	2324.6			862		BR	I	3348.951	3347.990	4		1020	
BE	II	2414.074	2413.340	1		332		BR	I	3349.528	3348.566	15		757	
BE	II	2414.189	2413.455	7		332		BR	I	3401.005	3400.030	25		757	
BE	II	2454.587	2453.844	15		332		BR	I	3401.035	3400.060	20		757	
BE	II	2508.184	2507.429	7		332		BR	I	3403.388	3402.411	15		757	
BE	II	2618.766	2617.985	3		332		BR	I	3403.412	3402.436	10		757	
BE	II	2618.914	2618.133	15		332		BR	I	3410.706	3409.728	15		757	
BE	II	2698.255	2697.455	3		332		BR	I	3410.731	3409.753	10		757	
BE	II	2698.385	2697.585	15		332		BR	I	3419.869	3418.888	15		757	
BE	II	2729.685	2728.877	15	7.	332		BR	I	3426.560	3425.577	60		757	
BE	II	2765.0	2764.2			862		BR	I	3429.586	3428.605	15		757	
BE	II	3047.410	3046.524	7		332		BR	I	3430.792	3429.809	8		757	
BE	II	3047.577	3046.691	25		332		BR	I	3473.162	3472.188	20		757	
BE	II	3131.327	3130.420	900	1.	332		BR	I	3473.210	3472.216	10		757	
BE	II	3131.973	3131.066	750	1.	332		BR	I	3497.367	3496.366	5		757	
BE	II	3181.6	3180.7			862		BR	I	3498.434	3497.433	1		757	
BE	II	3198.027	3197.103	15		332									
BE	II	3198.073	3197.149	25		332									
BE	II	3406.6	3405.6			862		BR	II	2107.702	2107.035	0		606	
BE	III	2077.60	2076.94	60		428		BR	II	2121.788	2121.119	1		606	
BE	III	2081.04	2080.38	40		428		BR	II	2137.068	2136.396	0		606	
BE	III	2119.23	2118.56	25		217		BR	II	2155.216	2154.540	10		606	
BE	III	2122.94	2122.27	4		428		BR	II	2187.751	2187.067	1		606	
BE	III	2127.87	2127.20	4		428									
BE	III	2137.60	2136.93	5		217		BR	II	2188.278	2187.596	50		606	
BE	III	2192.25	2191.57	5		217		BR	II	2204.678	2203.991	10		606	
								BR	II	2238.535	2237.841	10		606	
								BR	II	2241.147	2240.453	50		606	
								BR	II	2243.710	2243.015	150		606	
BE	IV	2059.532	2058.874			309		BR	II	2246.635	2245.939	150		606	
BE	IV	2336.613	2335.897			309		BR	II	2253.420	2252.723	0		606	
BE	IV	2440.957	2440.217			309		BR	II	2255.343	2254.651	10		606	
BE	IV	2511.744	2510.988			309		BR	II	2258.611	2257.913	0		606	
BE	IV	2531.259	2530.498			309		BR	II	2271.076	2270.374	250		606	
BE	IV	2605.400	2604.622			309		BR	II	2281.329	2280.627	250		606	
BE	IV	2733.871	2733.062			309		BR	II	2282.893	2282.190	50		606	
BE	IV	2907.074	2906.223			309		BR	II	2285.919	2285.215	500		606	
BE	IV	2918.809	2917.955			309		BR	II	2288.327	2287.623	500		606	
BE	IV	3203.755	3202.829			309		BR	II	2304.784	2304.076	250		606	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
BR	II	2318.032	2317.321	1000		606		BR	II	2393.198	2392.470	600		606	
BR	II	2329.265	2328.552	10		606		BR	II	2394.05	2393.32	50		606	
BR	II	2330.349	2329.636	10		606		BR	II	2396.124	2395.395	250		606	
BR	II	2335.190	2334.475	100		606		BR	II	2412.424	2411.692	0		606	
BR	II	2337.650	2336.934	600		606		BR	II	2489.292	2488.542	350		606	
BR	II	2344.166	2343.449	250		606		BR	II	2496.003	2495.251	350		606	
BR	II	2345.64	2344.92	1		606		BR	II	2522.508	2521.750	800		606	
BR	II	2346.096	2345.378	1		606		BR	II	2525.758	2525.000	150		606	
BR	II	2347.582	2346.863	150		606		BR	II	2542.263	2541.502	600		606	
BR	II	2359.880	2359.160	50		606		BR	II	2557.736	2556.970	600		606	
BR	II	2372.78	2372.05	0		606		BR	II	2576.983	2576.214	100		606	
BR	II	2378.065	2377.341	0		606		BR	II	2579.43	2578.66	50		606	
BR	II	2387.032	2386.306	150		606		BR	II	2690.948	2690.150	120	11.	488	
BR	II	2387.202	2386.476	500		606		BR	II	2690.991	2690.193	500		606	
BR	II	2387.432	2386.706	1000		606		BR	II	2710.377	2709.576	120	8.	488	
BR	II	2389.254	2388.527	150		606		BR	II	2714.510	2713.708	500	11.	488	
BR	II	2389.428	2388.701	350		606		BR	II	2714.587	2713.784	600		606	
BR	II	2389.712	2388.985	800		606		BR	II	2715.96	2715.16	0		606	
BR	II	2390.453	2389.726	1000		606		BR	II	2726.13	2725.32	10		606	
BR	II	2392.971	2392.243	500		606		BR	II	2727.843	2727.037	250		606	
								BR	II	2746.946	2746.134	10		606	
								BR	II	2747.328	2746.516	500		606	
								BR	II	2799.862	2799.038	250		606	
								BR	II	2800.885	2800.060	10		606	
								BR	II	2808.430	2807.606	350		606	
								BR	II	2813.569	2812.743	0		606	
								BR	II	2814.917	2814.090	100		606	
								BR	II	2835.24	2834.41	0		606	
								BR	II	2836.959	2836.126	50		606	
								BR	II	2846.963	2846.127	220	12.	488	
								BR	II	2849.149	2848.312	90	12.	488	
								BR	II	2849.972	2849.135	0		606	
								BR	II	2857.627	2856.788	0		606	
								BR	II	2867.841	2867.002	300	10.	488	
								BR	II	2867.876	2867.037	250		606	
								BR	II	2870.675	2869.835	0		606	
								BR	II	2873.379	2872.538	350	12.	488	
								BR	II	2874.057	2873.216	100	11.	488	
								BR	II	2874.134	2873.293	100		606	
								BR	II	2876.214	2875.372	220	11.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
BR	II	2876.287	2875.446	150		606		BR	II	3014.591	3013.714	1		606	
BR	II	2881.180	2880.337	10		606		BR	II	3016.862	3015.984	50		606	
BR	II	2888.002	2887.156	100		606		BR	II	3017.405	3016.528	350		606	
BR	II	2889.14	2888.29	1		606		BR	II	3029.838	3028.957	250		606	
BR	II	2892.926	2892.079	150		606		BR	II	3032.041	3031.160	0		606	
BR	II	2893.766	2892.919	50		606		BR	II	3035.541	3034.658	0		606	
BR	II	2894.270	2893.423	600		606		BR	II	3053.901	3053.016	50		606	
BR	II	2900.813	2899.964	350		606		BR	II	3061.193	3060.306	1		606	
BR	II	2900.921	2900.072	20	11.	488		BR	II	3079.196	3078.304	50		606	
BR	II	2901.068	2900.218	250		606		BR	II	3083.275	3082.381	50		606	
BR	II	2904.861	2904.010	1		606		BR	II	3085.272	3084.378	1		606	
BR	II	2904.950	2904.100	100		606		BR	II	3101.540	3100.641	100		606	
BR	II	2906.722	2905.871	100		606		BR	II	3108.053	3107.192	100		606	
BR	II	2908.326	2907.475	1		606		BR	II	3122.070	3121.165	150		606	
BR	II	2909.259	2908.408	0		606		BR	II	3123.430	3122.524	10		606	
BR	II	2911.632	2910.780	150		606		BR	II	3125.583	3124.680	50		606	
BR	II	2914.175	2913.322	100		606		BR	II	3144.356	3143.448	10		606	
BR	II	2918.084	2917.233	600		606		BR	II	3144.398	3143.490	50	10.	488	
BR	II	2922.727	2921.874	180	9.	488		BR	II	3147.324	3146.415	10		606	
BR	II	2922.778	2921.926	100		606		BR	II	3151.85	3150.94	10		606	
BR	II	2926.509	2925.655	120	10.	488		BR	II	3166.757	3165.842	10		606	
BR	II	2926.543	2925.689	100		606		BR	II	3175.57	3174.66	10		606	
BR	II	2946.41	2945.55	A		606		BR	II	3192.538	3191.616	50		606	
BR	II	2954.903	2954.041	50		606		BR	II	3193.963	3193.040	10		606	
BR	II	2958.93	2958.07	10		606		BR	II	3200.708	3199.783	150		606	
BR	II	2965.683	2964.817	0		606		BR	II	3209.255	3208.331	120	9.	488	
BR	II	2968.145	2967.279	600		606		BR	II	3251.818	3250.882	1		606	
BR	II	2973.177	2972.309	1000		606		BR	II	3269.995	3269.053	50		606	
BR	II	2974.330	2973.462	250		606		BR	II	3280.409	3279.465	0		606	
BR	II	2982.679	2981.812	250	9.	488		BR	II	3283.205	3282.260	50		606	
BR	II	2982.757	2981.890	350		606		BR	II	3290.227	3289.280	50		606	
BR	II	2984.627	2983.759	50		606		BR	II	3307.532	3306.583	0		606	
BR	II	2986.766	2985.897	350		606		BR	II	3311.23	3310.28	10		606	
BR	II	2991.951	2991.081	1		606		BR	II	3326.236	3325.282	10		606	
BR	II	2997.149	2996.278	10		606		BR	II	3339.453	3338.495	0		606	
BR	II	2997.774	2996.902	250		606		BR	II	3342.913	3341.954	10		606	
BR	II	3000.656	2999.783	10		606		BR	II	3344.478	3343.518	1		606	
BR	II	3009.506	3008.630	100		606		BR	II	3347.953	3346.992	180	9.	488	
BR	II	3011.589	3010.713	1		606		BR	II	3348.060	3347.100	100		606	
BR	II	3012.405	3011.529	100		606		BR	II	3354.352	3353.389	0		606	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
BR	II	3355.246	3354.284	0		606		BR	III	2804.94	2804.12	50		586	
BR	II	3367.113	3366.147	50		606		BR	III	2843.73	2842.89	85		586	
BR	II	3372.561	3371.593	10		606		BR	III	2850.75	2849.91	10		586	
BR	II	3375.524	3374.555	10		606		BR	III	2866.47	2865.63	30		586	
BR	II	3380.775	3379.804	1		606		BR	III	2901.84	2900.99	85		586	
BR	II	3388.15	3387.18	10		606		BR	III	2902.27	2901.42	120		586	
BR	II	3388.562	3387.590	10		606		BR	III	2911.49	2910.64	50		586	
BR	II	3390.280	3389.307	10		606		BR	III	2927.71	2926.86	350		586	
BR	II	3398.85	3397.88	10		606		BR	III	2937.02	2936.16	120		586	
BR	II	3401.90	3400.93	1		606		BR	III	2949.33	2948.47	10		586	
BR	II	3412.850	3411.874	1		606		BR	III	2969.82	2968.95	300		586	
BR	II	3418.218	3417.240	10		606		BR	III	2994.80	2993.93	300		586	
BR	II	3420.79	3419.82	1		606		BR	III	3021.53	3020.65	200		586	
BR	II	3424.882	3423.902	50		606		BR	III	3034.40	3033.52	85		586	
BR	II	3429.938	3428.956	100		606		BR	III	3042.81	3041.93	30		586	
BR	II	3433.31	3432.33	10		606		BR	IV	2180.46	2179.77	100		574	
BR	II	3438.073	3437.090	1		606		BR	IV	2491.90	2491.14	250		574	
BR	II	3453.516	3452.528	1		606		BR	IV	2574.45	2573.68	100		574	
BR	II	3477.041	3476.046	1		606		BR	IV	2581.96	2581.19	500		574	
BR	II	3478.015	3477.021	10		606		BR	IV	2662.19	2661.40	150		574	
BR	II	3481.58	3480.59	0		606		BR	IV	2821.70	2820.87	250		574	
BR	II	3485.043	3484.046	10		606		BR	IV	2866.45	2865.61	50		574	
BR	II	3496.258	3495.258	10		606		BR	IV	3042.07	3041.18	100		574	
BR	III	2697.25	2696.45	1		586		C	I	2479.310	2478.561	800	61.	821	
BR	III	2711.59	2710.79	1		586		C	I	2583.674	2582.901	E	60.	821	
BR	III	2736.66	2735.85	10		586		C	I	2903.15	2902.30	E	66.	821	U
BR	III	2745.97	2745.16	30		586		C	I	2904.11	2903.26	E	66.	821	U
BR	III	2750.51	2749.70	10		586		C	I	2905.80	2904.95	E	66.	821	U
BR	III	2751.41	2750.60	30		586		C	I	2965.705	2964.840	1	1.	821	
BR	III	2752.80	2751.99	10		586		C	I	2968.078	2967.214	4	1.	821	
BR	III	2754.12	2753.31	10		586		C	I	3421.386	3420.405	1	7.1	821	
BR	III	2759.92	2759.11	50		586		C	I	3459.494	3458.503	4	7.1	821	
BR	III	2760.70	2759.89	120		586		C	I	3515.806	3514.801	12	7.1	821	
BR	III	2767.55	2766.73	120		586		C	II	2018.59	2017.94	4	18.	287	
BR	III	2768.68	2767.86	10		586		C	II	2019.03	2018.38	10	18.	287	
BR	III	2794.77	2793.95	1		586		C	II	2052.44	2051.79	10	35.	287	
BR	III	2801.26	2800.43	30		586		C	II	2052.82	2052.16	10	35.	287	
BR	III	2803.45	2802.62	50		586		C	II	2091.83	2091.17	10	28.	287	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
C	II	2092.30	2091.63	10	28.	287	C	II	2432.86	2432.12	1	52.	287
C	II	2093.79	2093.13	4	28.	287	C	II	2433.63	2432.90	1	52.	287
C	II	2115.39	2114.72	1	45.	287	C	II	2434.23	2433.49	1	38.	287
C	II	2138.091	2137.417	25	17.	287	C	II	2434.98	2434.24	10	51.	287
C	II	2138.571	2137.897	60	17.	287	C	II	2435.55	2434.81	4	51.	287
C	II	2155.38	2154.70	1	39.	287	C	II	2491.62	2490.87	10	58.	287
C	II	2156.07	2155.39	1	39.	287	C	II	2492.12	2491.37	10	58.	287
C	II	2156.95	2156.28	4	39.	287	C	II	2509.877	2509.121	250	14.	287
C	II	2174.529	2173.848	60	14.06	287	C	II	2512.490	2511.734	60	14.	287
C	II	2174.850	2174.168	25	14.06	287	C	II	2512.821	2512.065	350	14.	287
C	II	2188.16	2187.48	4	29.	287	C	II	2539.75	2538.98	10	42.	287
C	II	2189.07	2188.39	10	29.	287	C	II	2541.15	2540.39	25	42.	287
C	II	2189.40	2188.72	4	29.	287	C	II	2541.64	2540.88	4	42.	287
C	II	2190.30	2189.62	4	29.	287	C	II	2544.21	2543.45	10	42.	287
C	II	2241.75	2241.05	4	44.	287	C	II	2547.57	2546.81	10	50.	287
C	II	2242.80	2242.10	4	44.	287	C	II	2548.11	2547.35	4	50.	287
C	II	2255.93	2255.23	1	43.	287	C	II	2555.244	2554.478	25	30.	287
C	II	2256.38	2255.68	4	43.	287	C	II	2556.43	2555.66	4	30.	287
C	II	2256.88	2256.19	10	43.	287	C	II	2556.89	2556.12	1	30.	287
C	II	2257.48	2256.79	1	43.	287	C	II	2571.34	2570.57	10		287
C	II	2268.47	2267.77	1	34.	287	C	II	2572.53	2571.76	4	57.	287
C	II	2269.61	2268.91	4	34.	287	C	II	2575.597	2574.826	250	24.	287
C	II	2270.06	2269.36	1	34.	287	C	II	2592.185	2591.410	10	36.	287
C	II	2270.40	2269.70	10	34.	287	C	II	2592.620	2591.845	40	36.	287
C	II	2270.90	2270.20	10	34.	287	C	II	2593.48	2592.71	4	36.	287
C	II	2324.211	2323.500	34	0.0	510	C	II	2601.83	2601.05	4	33.	287
C	II	2325.401	2324.689	84	0.0	510	C	II	2602.20	2601.42	10	33.	287
C	II	2326.113	2325.401	87	0.0	510	C	II	2602.80	2602.02	10	33.	287
C	II	2327.642	2326.930	70	0.0	510	C	II	2603.17	2602.39	10	33.	287
C	II	2328.835	2328.122	84	0.0	510	C	II	2603.939	2603.161	25	33.	287
C	II	2375.81	2375.08	40	26.	287	C	II	2604.50	2603.72	4	33.	287
C	II	2402.492	2401.781	60	16.	287	C	II	2605.641	2604.863	40	33.	287
C	II	2403.133	2402.402	120	16.	287	C	II	2606.40	2605.62	4	33.	287
G	II	2427.44	2426.70	10	25.	287	C	II	2613.22	2612.45	10	43.02	287
C	II	2431.52	2430.78	4	38.	287	C	II	2620.98	2620.20	25	27.	287
							C	II	2623.69	2622.90	10	27.	287
							C	II	2629.24	2628.46	4	59.	287
							C	II	2641.347	2640.560	90	32.	287
							C	II	2641.681	2640.894	60	32.	287
							C	II	2642.212	2641.425	150	32.	287

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
C	II	2643.118	2642.331	25	32.	287	C	II	2967.737	2966.871	60	40.	287
C	II	2644.214	2643.427	25	32.	287	C	II	2968.496	2967.629	25	40.	287
C	II	2670.754	2669.960	25	23.	287	C	II	2968.735	2967.868	120	40.	287
C	II	2709.2	2708.4	4	61.	287	C	II	2969.703	2968.836	10	40.	287
C	II	2711.39	2710.59	4	60.	287	C	II	2970.450	2969.590	1	40.	287
C	II	2713.12	2712.32	1	60.	287	C	II	2993.491	2992.618	800	8.	287
C	II	2728.170	2727.360	10	31.	287	C	II	3040.599	3039.714	25	29.	287
C	II	2729.515	2728.707	40	31.	287	C	II	3041.397	3040.512	10	29.	287
C	II	2730.021	2729.213	10	31.	287	C	II	3049.580	3048.690	1	43.01	287
C	II	2731.420	2730.610	4	31.	287	C	II	3049.820	3048.933	10	43.01	287
C	II	2747.300	2746.488	250	15.	287	C	II	3050.285	3049.398	25	43.	287
C	II	2748.094	2747.282	350	15.	287	C	II	3050.558	3049.671	25	43.	287
C	II	2765.937	2765.120	4	37.	287	C	II	3057.740	3056.850	4	47.	287
C	II	2766.935	2766.118	10	37.	287	C	II	3059.340	3058.450	10	47.	287
C	II	2768.490	2767.673	25	37.	287	C	II	3059.980	3059.091	25	47.	287
C	II	2798.53	2797.70	4	49.	287	C	II	3060.720	3059.830	1	47.	287
C	II	2799.97	2799.15	4	49.	287	C	II	3061.530	3060.640	4	47.01	287
C	II	2802.030	2801.210	60	48.	287	C	II	3083.276	3082.381	10	33.04	287
C	II	2802.250	2801.430	25	48.	287	C	II	3083.947	3083.052	10	33.04	287
C	II	2803.22	2802.39	1	48.	287	C	II	3087.799	3086.903	4	38.02	287
C	II	2803.78	2802.95	1	48.	287	C	II	3088.79	3087.90	1	38.02	287
C	II	2804.28	2803.45	1	48.	287	C	II	3101.470	3100.570	10	7.01	287
C	II	2819.960	2819.130	4	47.	287	C	II	3122.991	3122.086	4	28.02	287
C	II	2820.830	2820.000	4	47.	287	C	II	3125.039	3124.133	10	28.02	287
C	II	2821.520	2820.700	4	47.	287	C	II	3138.830	3137.920	4	16.07	287
C	II	2822.370	2821.540	4	47.	287	C	II	3142.950	3142.040	1	16.07	287
C	II	2823.643	2822.812	10	47.	287	C	II	3158.040	3157.130	1	38.01	287
C	II	2837.544	2836.710	1000	13.	287	C	II	3166.383	3165.467	200	9.	287
C	II	2838.437	2837.603	800	13.	287	C	II	3166.890	3165.974	40	9.	287
C	II	2858.840	2858.000	4	55.	287	C	II	3168.848	3167.931	150	9.	287
C	II	2861.900	2861.060	10	55.	287	C	III	2009.977	2009.327	20	11.71	34
C	II	2885.654	2884.808	40	54.	287	C	III	2010.220	2009.570	70	11.71	34
C	II	2886.315	2885.469	90	54.	287	C	III	2010.740	2010.094	110	11.71	34
C	II	2906.566	2905.715	10	41.	287	C	III	2016.4	2015.7	1	42.	34
C	II	2906.862	2906.011	10	41.	287	C	III	2017.49	2016.84	5	42.	34
C	II	2907.940	2907.090	4	41.	287	C	III	2092.664	2091.999	160	12.01	34
C	II	2909.809	2908.957	10	41.	287	C	III	2101.12	2100.46	1	23.	34
C	II	2911.581	2910.729	25	41.	287	C	III	2140.53	2139.86	5	40.	34
C	II	2967.053	2966.187	25	40.	287	C	III	2141.59	2140.92	5	40.	34
C	II	2967.521	2966.655	25	40.	287	C	III	2143.16	2142.49	5	38.	34

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
C	III	2146.26	2145.58	1	38.	34		C	III	3162.830	3161.920	20	5.01	34	
C	III	2163.623	2162.944	360	15.	34		C	III	3170.933	3170.016	70	8.	34	
C	III	2177.643	2176.963	70	14.	34		C	III	3258.940	3258.000	5	6.	34	
C	III	2203.23	2202.54	5	27.	34		C	III	3260.481	3259.541	20	6.	34	
C	III	2297.578	2296.870	1000	8.	34		C	III	3263.213	3262.272	40	6.	34	
C	III	2481.251	2480.502	70	29.	34	Q	C	IV	2104.61	2103.94	25	11.20	35	
C	III	2481.610	2480.861	70	29.	34		C	IV	2104.91	2104.24	7	11.20	35	
C	III	2610.610	2609.830	5	12.	34		C	IV	2336.7	2335.9	25	21.	35	
C	III	2610.799	2610.020	160	12.	34		C	IV	2405.17	2404.44	170	12.01	35	
C	III	2615.259	2614.478	110	12.	34		C	IV	2405.84	2405.10	250	12.01	35	
C	III	2617.408	2616.627	70	12.	34		C	IV	2524.4	2523.7	100	14.01	35	F
C	III	2671.034	2670.240	40	32.	34		C	IV	2525.17	2524.41	600	14.	35	Q
C	III	2672.110	2671.318	70	32.	34		C	IV	2528.5	2527.7	7	13.01	35	F
C	III	2673.750	2672.959	110	32.	34		C	IV	2530.74	2529.98	900	15.	35	
C	III	2698.220	2697.420	40	28.	34		C	IV	2531.3	2530.6	250	14.03	35	F
C	III	2698.54	2697.75	220	28.	34		C	IV	2534.53	2533.77	25	14.02	35	
C	III	2725.66	2724.85	160	33.	34		C	IV	2595.865	2595.089	100	13.	35	
C	III	2726.10	2725.30	220	33.	34		C	IV	2596.071	2595.295	60	13.	35	
C	III	2726.70	2725.90	220	33.	34		C	IV	2698.54	2697.75	100	12.	35	
C	III	2752.642	2751.828	40	34.	34		C	IV	2699.47	2698.67	100	12.	35	
C	III	2778.534	2777.714	110	35.	34		C	IV	2820.08	2819.24	7	17.	35	Q
C	III	2795.390	2794.560	20	36.	34		C	IV	2902.45	2901.60	25	19.	35	
C	III	2797.280	2796.460	40	36.	34		C	IV	2907.14	2906.29	170	20.	35	
C	III	2800.290	2799.470	70	36.	34		C	IV	2935.98	2935.12	7	18.	35	
C	III	2805.960	2805.130	1	31.	34		C	IV	2954.3	2953.4	1	16.	35	Q
C	III	2807.140	2806.310	5	31.	34		C	IV	2954.81	2953.95	7	16.	35	
C	III	2808.900	2808.070	5	31.	34									
C	III	2844.953	2844.117	20	7.28	34									
C	III	2849.887	2849.050	110	24.	34		C	V	2271.61	2270.91	40	12.	164	
C	III	2853.97	2853.13	2	43.	34		C	V	2277.96	2277.25	5	12.	164	
								C	V	2278.63	2277.92	20	12.	164	
C	III	2854.97	2854.13	1	43.	34		C	VI	2070.91	2070.25		78.	309	
C	III	2857.852	2857.013	5	26.	34		C	VI	2082.83	2082.16		89.	309	
C	III	2864.553	2863.712	70	37.	34		C	VI	2084.42	2083.76			309	
C	III	2875.080	2874.240	1	22.	34		C	VI	2264.01	2263.31			309	
C	III	2875.270	2874.430	5	22.	34		C	VI	2405.49	2404.76			309	
C	III	2875.566	2874.722	40	22.	34									
C	III	2982.976	2982.106	285	13.	34		C	VI	2431.99	2431.25			309	
C	III	3039.790	3038.910	5	25.	34		C	VI	2607.47	2606.69			309	
C	III	3152.760	3151.850	1	5.01	34		C	VI	2916.04	2915.19			309	
C	III	3156.000	3155.090	5	5.01	34		C	VI	3139.55	3138.64			309	
								C	VI	3434.64	3433.66		88.	309	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CA	I	2028.909	2028.257			101	A	CA	I	2031.432	2030.779			101	A
CA	I	2028.931	2028.279			101	A	CA	I	2031.617	2030.964			101	A
CA	I	2028.951	2028.299			101	A	CA	I	2031.818	2031.165			101	A
CA	I	2028.974	2028.322			101	A	CA	I	2032.036	2031.383			101	A
CA	I	2028.996	2028.344			101	A	CA	I	2032.275	2031.622			101	A
CA	I	2029.020	2028.368			101	A	CA	I	2032.536	2031.883			101	A
CA	I	2029.044	2028.392			101	A	CA	I	2032.823	2032.170			101	A
CA	I	2029.070	2028.418			101	A	CA	I	2033.139	2032.486			101	A
CA	I	2029.097	2028.445			101	A	CA	I	2033.488	2032.835			101	A
CA	I	2029.124	2028.472			101	A	CA	I	2033.876	2033.225			101	A
CA	I	2029.154	2028.502			101	A	CA	I	2034.307	2033.653			101	A
CA	I	2029.185	2028.533			101	A	CA	I	2034.789	2034.135			101	A
CA	I	2029.217	2028.565			101	A	CA	I	2035.300	2034.676			101	A
CA	I	2029.250	2028.598			101	A	CA	I	2035.939	2035.285			101	A
CA	I	2029.285	2028.633			101	A	CA	I	2036.630	2035.976			101	A
CA	I	2029.322	2028.670			101	A	CA	I	2037.417	2036.762			101	A
CA	I	2029.360	2028.708			101	A	CA	I	2038.320	2037.667			101	A
CA	I	2029.401	2028.749			101	A	CA	I	2039.360	2038.707			101	A
CA	I	2029.443	2028.791			101	A	CA	I	2040.570	2039.916			101	A
CA	I	2029.488	2028.836			101	A	CA	I	2041.986	2041.332			101	A
CA	I	2029.536	2028.884			101	A	CA	I	2043.660	2043.005			101	A
CA	I	2029.586	2028.934			101	A	CA	I	2045.656	2045.001			101	A
CA	I	2029.637	2028.985			101	A	CA	I	2048.066	2047.410			101	A
CA	I	2029.694	2029.042			101	A	CA	I	2051.010	2050.353			101	A
CA	I	2029.752	2029.100			101	A	CA	I	2054.661	2054.005			101	A
CA	I	2029.814	2029.162			101	A	CA	I	2059.261	2058.603			101	A
CA	I	2029.880	2029.228			101	A	CA	I	2065.173	2064.513			101	A
CA	I	2029.950	2029.298			101	A	CA	I	2072.946	2072.286			101	A
CA	I	2030.024	2029.372			101	A	CA	I	2083.442	2082.781			101	A
CA	I	2030.102	2029.450			101	A	CA	I	2098.103	2097.439			296	A
CA	I	2030.187	2029.535			101	A	CA	I	2119.342	2118.672	1		1018	A
CA	I	2030.275	2029.623			101	A	CA	I	2151.473	2150.796	3	8.	1018	A
CA	I	2030.371	2029.719			101	A	CA	I	2201.415	2200.728	10	7.	1018	A
CA	I	2030.473	2029.821			101	A	CA	I	2276.165	2275.462	15	6.	1018	A
CA	I	2030.581	2029.929			101	A	CA	I	2399.289	2398.559	25	5.	1018	A
CA	I	2030.699	2030.047			101	A	CA	I	2542.244	2541.483		4.	101	
CA	I	2030.824	2030.172			101	A	CA	I	2555.527	2554.761	2	11.	1018	
CA	I	2030.959	2030.306			101	A	CA	I	2557.95	2557.18	4	11.	488	
CA	I	2031.105	2030.452			101	A	CA	I	2558.941	2558.174	1	11.	1018	
CA	I	2031.263	2030.610			101	A	CA	I	2559.37	2558.60	4	11.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CA	II	2103.902	2103.235	10	9.	186	
CA	II	2113.426	2112.757	10	9.	186	
CA	II	2113.815	2113.146	4	9.	186	
CA	II	2129.422	2128.750	1	3.	186	
CA	II	2132.178	2131.505	10	3.	186	
CA	II	2132.977	2132.304	4	3.	186	
CA	II	2198.473	2197.787	10	8.	186	
CA	II	2209.299	2208.611	25	8.	186	
CA	II	2988.59	2987.72	4	11.	1015	
CA	II	2990.29	2989.42	4	11.	1015	
CA	II	3124.20	3123.29	25	10.	1015	
CA	II	3126.05	3125.15	60	10.	1015	
CA	II	3159.76J	3158.869	460	4.	186	H
CA	II	3180.252	3179.332	520	4.	186	H
CA	II	3182.195	3181.275	360	4.	186	H
CA	II	3347.95	3346.99	250	9.	1015	
CA	III	2000.311	1999.663	300		85	
CA	III	2000.567	1999.919	150		85	
CA	III	2001.543	2000.895	300		85	
CA	III	2002.050	2001.402	250		85	
CA	III	2003.636	2002.987	250		85	
CA	III	2014.754	2014.104	250		85	
CA	III	2019.348	2018.697	300		85	
CA	III	2021.424	2020.772	250		85	
CA	III	2026.703	2026.050	250		85	
CA	III	2027.242	2026.589	120		85	
CA	III	2028.320	2027.667	120		85	
CA	III	2034.012	2033.358	350		85	
CA	III	2042.193	2042.538	350		85	
CA	III	2048.459	2048.803	300		85	
CA	III	2047.193	2046.537	250		85	
CA	III	2047.475	2046.819	250		85	
CA	III	2047.850	2047.193	200		85	
CA	III	2048.950	2048.293	250		85	
CA	III	2057.253	2056.595	250		85	
CA	III	2062.814	2062.154	200	16.	85	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CA	III	2064.184	2063.524	150		85	
CA	III	2068.287	2067.627	200		85	
CA	III	2075.503	2074.841	200		85	
CA	III	2079.578	2078.916	400		85	
CA	III	2099.163	2098.497	400		85	
CA	III	2107.804	2107.136	200		85	
CA	III	2115.082	2114.413	570		85	
CA	III	2123.700	2123.029	700		85	
CA	III	2127.484	2126.812	250		85	
CA	III	2129.863	2129.191	400	15.	85	
CA	III	2134.626	2133.953	400		85	
CA	III	2137.514	2136.840	25		85	
CA	III	2140.205	2139.531	120		85	
CA	III	2141.034	2140.359	400		85	
CA	III	2141.305	2140.630	40	16.	85	
CA	III	2144.422	2143.747	200		85	
CA	III	2150.199	2149.523	2	16.	85	
CA	III	2153.112	2152.435	650	14.	85	
CA	III	2161.026	2160.347	200		85	
CA	III	2164.095	2163.416	250		85	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CA	III	2170.094	2169.414	10		85		CA	III	2357.353	2356.632	15		64	
CA	III	2172.003	2171.322	250	16.	85		CA	III	2360.40	2359.68	1		891	
CA	III	2172.247	2171.566	350		85		CA	III	2360.55	2359.83	1		891	
CA	III	2173.391	2172.710	25	16.	85		CA	III	2388.678	2387.950	200		85	
CA	III	2179.266	2178.584	300		85		CA	III	2393.893	2393.164	300		85	
CA	III	2182.697	2182.014	250		85		CA	III	2408.259	2407.527	150		85	
CA	III	2186.947	2186.263	60		85		CA	III	2431.820	2431.082	250		85	
CA	III	2191.894	2191.209	200		85		CA	III	2434.063	2433.325	200		85	
CA	III	2196.855	2196.169	40		85		CA	III	2443.291	2442.551	200	9.	64	
CA	III	2203.091	2202.404	250		85		CA	III	2471.039	2470.292	160		64	
CA	III	2205.003	2204.315	300	16.	85		CA	III	2473.288	2472.541	200	9.	64	
CA	III	2220.542	2219.851	300		85		CA	III	2494.269	2493.517	160	9.	64	
CA	III	2226.251	2225.559	25		85		CA	III	2498.463	2497.736	315	9.	64	
CA	III	2232.129	2231.436	200		85		CA	III	2542.261	2541.498	360	9.	64	
CA	III	2234.308	2233.614	60		85		CA	III	2587.927	2587.153	270	9.	64	
CA	III	2253.144	2252.446	120		85		CA	III	2591.186	2590.411	230		64	
CA	III	2255.904	2255.205	150		85		CA	III	2621.599	2620.817	360	9.	64	
CA	III	2266.77	2266.07	7		891		CA	III	2634.924	2634.139	360	9.	64	
CA	III	2270.544	2269.842	250		85		CA	III	2656.172	2655.382	160		64	
CA	III	2276.72	2276.01	25		891		CA	III	2687.520	2686.722	230		64	
CA	III	2277.215	2276.512	350		85		CA	III	2688.562	2687.764	410	8.	64	
CA	III	2282.17	2281.47	40		391		CA	III	2705.661	2704.859	360	9.	64	
CA	III	2284.39	2283.68	15		891		CA	III	2752.611	2751.698	15		64	
CA	III	2294.346	2293.639	25		85		CA	III	2764.912	2764.095	25		64	
CA	III	2299.043	2298.335	3		64		CA	III	2772.095	2771.277	315		64	
CA	III	2305.66	2304.95	7		891		CA	III	2792.413	2791.590	360	8.	64	
CA	III	2306.12	2305.42	25		891		CA	III	2797.170	2796.346	100		64	
CA	III	2311.01	2310.30	25		891		CA	III	2798.028	2797.203	60		64	
CA	III	2311.507	2310.796	250		85		CA	III	2800.211	2799.386	80		64	
CA	III	2312.787	2312.076	570		85		CA	III	2814.706	2813.877	410		64	
CA	III	2321.952	2321.239	25		64		CA	III	2816.220	2815.391	60		64	
CA	III	2324.042	2323.329	15		64		CA	III	2819.370	2818.540	60		64	
CA	III	2330.10	2329.39	25		891		CA	III	2821.403	2820.573	80		64	
CA	III	2335.842	2335.126	3		64		CA	III	2824.947	2824.116	40		64	
CA	III	2337.972	2337.255	3		64		CA	III	2828.833	2828.001	40		64	
CA	III	2339.371	2338.654	7		64		CA	III	2844.004	2843.169	60		64	
CA	III	2342.263	2341.546	1		64		CA	III	2845.894	2845.058	80		64	
CA	III	2344.514	2343.796	1		64		CA	III	2867.379	2866.538	460	11.	64	
CA	III	2352.073	2351.353	250		85		CA	III	2870.787	2869.945	520	7.	64	
CA	III	2356.064	2355.344	3		64		CA	III	2882.627	2881.782	580	7.	64	

[illegible]

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CL	II	2199.050	2198.363	66	.	613		CL	II	2420.571	2419.836	7	.	613	
CL	II	2212.335	2211.645	22	.	613		CL	II	2421.033	2420.298	5	.	613	
CL	II	2212.948	2212.259	51	.	613		CL	II	2423.554	2422.818	13	.	613	
CL	II	2246.283	2245.587	6	.	613		CL	II	2424.734	2423.998	19	.	613	
CL	II	2251.644	2250.946	105	9.	613		CL	II	2428.523	2427.786	130	11.	613	
CL	II	2252.175	2251.477	100	9.	613		CL	II	2428.745	2428.008	29	.	613	
CL	II	2253.830	2253.132	105	9.	613		CL	II	2430.871	2430.133	140	11.	613	
CL	II	2257.045	2256.346	11	.	613		CL	II	2430.895	2430.157	140	11.	613	
CL	II	2276.96	2276.25	8	.	345		CL	II	2431.895	2431.157	2	.	613	
CL	II	2288.360	2287.655	20	.	613		CL	II	2434.014	2433.276	7	.	613	
CL	II	2288.865	2288.159	56	.	613		CL	II	2434.807	2434.069	190	11.	613	
CL	II	2291.024	2290.318	10	.	613		CL	II	2434.852	2434.114	130	11.	613	
CL	II	2292.080	2291.374	10	.	613		CL	II	2436.96J	2436.241	17	.	613	
CL	II	2295.667	2294.959	43	.	613		CL	II	2441.078	2440.338	35	.	613	
CL	II	2295.913	2295.205	15	.	613		CL	II	2441.206	2440.466	8	.	613	
CL	II	2301.518	2300.809	15	.	613		CL	II	2441.265	2440.525	5	.	613	
CL	II	2305.30	2304.59	2	.	345		CL	II	2441.738	2440.997	7	.	613	
CL	II	2309.65	2308.94	4	.	345		CL	II	2443.288	2442.548	53	.	613	
CL	II	2320.935	2320.222	2	.	613		CL	II	2443.665	2442.925	2	.	613	
CL	II	2321.988	2321.275	2	.	613		CL	II	2444.862	2444.122	26	.	613	
CL	II	2322.71	2322.00	2	.	345		CL	II	2446.087	2445.346	70	.	613	
CL	II	2323.73	2323.02	8	.	345		CL	II	2448.081	2447.340	2	.	613	
CL	II	2327.82	2327.10	4	.	345		CL	II	2448.944	2448.202	10	.	613	
CL	II	2333.62	2332.90	4	.	345		CL	II	2453.060	2452.318	26	.	613	
CL	II	2341.32	2340.60	4	.	345		CL	II	2460.606	2459.862	47	.	613	
CL	II	2365.965	2365.242	1	.	613		CL	II	2467.474	2466.729	3	.	613	
CL	II	2381.161	2380.435	1	.	613		CL	II	2468.270	2467.524	1	.	613	
CL	II	2399.643	2398.913	1	.	613		CL	II	2470.009	2469.262	3	.	613	
CL	II	2400.561	2399.830	3	.	613		CL	II	2473.441	2472.694	8	.	613	
CL	II	2401.35	2400.62	2	.	345		CL	II	2478.623	2477.874	5	.	613	
CL	II	2402.60	2401.87	4	.	345		CL	II	2483.077	2482.327	2	.	613	
CL	II	2403.081	2402.350	1	.	613		CL	II	2487.491	2486.740	4	.	613	
CL	II	2404.60	2403.87	6	.	345		CL	II	2490.155	2489.404	6	.	613	
CL	II	2404.868	2404.136	1	.	613		CL	II	2493.40	2492.65	4	.	345	
CL	II	2405.321	2404.590	8	.	613		CL	II	2493.59	2492.84	6	.	345	
CL	II	2405.94	2405.21	2	.	345		CL	II	2496.750	2495.998	140	10.	613	
CL	II	2406.59	2405.86	4	.	345		CL	II	2499.283	2498.529	185	10.	613	
CL	II	2407.811	2407.079	8	.	613		CL	II	2500.056	2499.303	5	.	613	
CL	II	2413.208	2412.475	19	.	613		CL	II	2503.491	2502.737	230	10.	613	
CL	II	2419.185	2418.451	1	.	613		CL	II	2512.08	2511.33	6	.	345	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CL	II	2513.173	2512.416	5	.	613		CL	II	2627.685	2626.902	11	.	613	
CL	II	2514.103	2513.346	5	.	613		CL	II	2630.979	2630.195	11	.	613	
CL	II	2514.77	2514.01	6	.	345		CL	II	2632.134	2631.349	2	.	613	
CL	II	2516.653	2515.896	10	.	613		CL	II	2633.605	2632.821	3	.	613	
CL	II	2518.896	2518.139	17	.	613		CL	II	2633.732	2632.947	4	.	613	
CL	II	2520.608	2519.850	7	.	613		CL	II	2634.89	2634.10	4	.	345	
CL	II	2520.837	2520.079	13	.	613		CL	II	2635.733	2634.948	56	.	613	
CL	II	2529.363	2528.602	21	.	613		CL	II	2636.092	2635.306	2	.	613	
CL	II	2544.758	2543.994	77	13.	613		CL	II	2636.23	2635.44	6	.	345	
CL	II	2545.621	2544.856	100	13.	613		CL	II	2636.593	2635.807	8	.	613	
CL	II	2547.721	2546.956	160	13.	613		CL	II	2643.064	2642.277	9	.	613	
CL	II	2548.535	2547.770	91	13.	613		CL	II	2647.636	2646.848	100	.	613	
CL	II	2549.846	2549.080	10	.	613		CL	II	2647.687	2646.898	120	.	613	
CL	II	2550.644	2549.878	240	13.	613		CL	II	2648.566	2647.777	57	.	613	
CL	II	2564.895	2564.127	81	.	613		CL	II	2648.976	2648.187	58	.	613	
CL	II	2565.612	2564.844	220	8.	613		CL	II	2659.514	2658.723	310	7.	613	
CL	II	2565.704	2564.935	13	.	613		CL	II	2660.46	2659.67	6	.	345	
CL	II	2566.057	2565.289	160	8.	613		CL	II	2667.247	2666.454	61	12.	613	
CL	II	2566.775	2566.006	54	8.	613		CL	II	2668.141	2667.348	93	12.	613	
CL	II	2568.892	2568.122	67	.	613		CL	II	2668.191	2667.398	28	12.	613	
CL	II	2569.025	2568.256	53	.	613		CL	II	2672.203	2671.408	72	.	613	
CL	II	2571.866	2571.096	130	.	613		CL	II	2672.971	2672.176	165	6.	613	
CL	II	2581.17	2580.40	8	.	345		CL	II	2677.747	2676.951	270	6.	613	
CL	II	2583.582	2582.809	15	.	613		CL	II	2680.151	2679.355	18	.	613	
CL	II	2604.091	2603.314	180	.	613		CL	II	2688.838	2688.040	340	6.	613	
CL	II	2604.941	2604.162	130	.	613		CL	II	2690.174	2689.375	14	.	613	
CL	II	2605.626	2604.848	1	.	613		CL	II	2692.454	2691.655	20	.	613	
CL	II	2606.430	2605.651	22	.	613		CL	II	2694.21	2693.41	2	.	345	
CL	II	2609.020	2608.241	14	.	613		CL	II	2695.414	2694.615	8	.	613	
CL	II	2609.479	2608.700	15	.	613		CL	II	2695.82	2695.02	6	.	345	
CL	II	2614.027	2613.247	6	.	613		CL	II	2699.36	2698.56	4	.	345	
CL	II	2615.428	2614.648	41	.	613		CL	II	2699.74	2698.94	2	.	345	
CL	II	2615.905	2615.124	100	.	613		CL	II	2707.540	2706.738	9	.	613	
CL	II	2618.245	2617.463	29	.	613		CL	II	2708.079	2707.277	4	.	613	
CL	II	2618.709	2617.928	2	.	613		CL	II	2709.40	2708.60	2	.	345	
CL	II	2620.570	2619.788	38	.	613		CL	II	2709.814	2709.011	46	.	613	
CL	II	2622.665	2621.883	13	.	613		CL	II	2710.284	2709.481	4	.	613	
CL	II	2623.404	2622.621	2	.	613		CL	II	2710.390	2709.587	15	.	613	
CL	II	2624.887	2624.104	5	.	613		CL	II	2710.594	2709.791	6	.	613	
CL	II	2626.272	2625.488	17	.	613		CL	II	2713.553	2712.748	10	.	613	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CL	II	2715.19	2714.38	16	.	613		CL	II	2951.213	2950.351	32	.	613	
CL	II	2717.323	2716.518	4	.	613		CL	II	2965.054	2964.188	43	.	613	
CL	II	2720.407	2719.601	10	.	613		CL	II	2973.475	2972.606	22	.	613	
CL	II	2720.65	2719.85	2	.	345		CL	II	2974.32	2973.46	4	.	345	
CL	II	2727.000	2726.192	10	.	613		CL	II	2979.35	2978.48	14	.	345	
CL	II	2745.06	2744.25	2	.	345		CL	II	2981.306	2980.436	12	.	613	
CL	II	2746.56	2745.75	6	.	345		CL	II	2981.754	2980.884	14	.	613	
CL	II	2748.805	2747.992	10	.	613		CL	II	2983.646	2982.776	148	53.	613	
CL	II	2752.318	2751.504	15	.	613		CL	II	2993.984	2993.111	160	22.	613	
CL	II	2754.844	2754.029	11	.	613		CL	II	2997.520	2996.646	310	22.	613	
CL	II	2754.915	2754.101	57	.	613		CL	II	3003.842	3002.967	13	.	613	
CL	II	2757.970	2757.155	4	.	613		CL	II	3005.285	3004.409	145	22.	613	
CL	II	2759.453	2758.683	23	.	613		CL	II	3006.935	3006.060	220	22.	613	
CL	II	2764.694	2763.877	44	.	613		CL	II	3007.849	3006.973	170	53.	613	
CL	II	2772.59	2771.78	4	.	345		CL	II	3019.724	3018.844	150	22.	613	
CL	II	2789.45	2788.63	6	.	345		CL	II	3023.795	3022.915	168	57.	613	
CL	II	2800.42	2799.60	8	.	345		CL	II	3030.882	3030.000	1	.	613	
CL	II	2801.10	2800.27	8	.	345		CL	II	3037.243	3036.359	3	.	613	
CL	II	2833.177	2832.343	53	.	613		CL	II	3038.844	3037.960	200	53.	613	
CL	II	2836.439	2835.606	23	.	613		CL	II	3043.141	3042.256	23	.	613	
CL	II	2839.89	2839.06	2	.	345		CL	II	3045.908	3045.023	105	21.	613	
CL	II	2845.11	2844.28	8	.	345		CL	II	3054.647	3053.758	122	14.	613	
CL	II	2861.55	2860.71	10	.	345		CL	II	3058.852	3057.963	310	14.	613	
CL	II	2862.90	2862.06	10	.	345		CL	II	3070.561	3069.669	138	14.	613	
CL	II	2864.39	2863.55	14	.	345		CL	II	3072.212	3071.320	360	14.	613	
CL	II	2865.995	2865.153	16	.	613		CL	II	3093.091	3092.193	370	14.	613	
CL	II	2869.234	2868.392	67	.	613		CL	II	3093.824	3092.926	48	.	613	
CL	II	2877.242	2876.398	35	.	613		CL	II	3097.594	3096.695	290	31.	613	
CL	II	2880.34	2879.50	4	.	345		CL	II	3104.678	3103.777	43	.	613	
CL	II	2880.68	2879.84	6	.	345		CL	II	3120.719	3119.814	132	20.	613	
CL	II	2884.867	2884.022	41	.	613		CL	II	3120.779	3119.875	160	20.	613	
CL	II	2887.48	2886.63	6	.	345		CL	II	3122.501	3121.596	245	20.	613	
CL	II	2888.248	2887.401	110	.	613		CL	II	3124.622	3123.717	340	20.	613	
CL	II	2903.30	2902.45	8	.	345		CL	II	3125.111	3124.206	230	20.	613	
CL	II	2907.068	2906.217	130	14.	613		CL	II	3126.346	3125.441	160	20.	613	
CL	II	2912.902	2912.050	200	.	613		CL	II	3126.896	3125.990	125	20.	613	
CL	II	2916.374	2915.520	91	.	613		CL	II	3148.748	3147.837	190	10.	613	
CL	II	2935.45	2934.60	10	.	345		CL	II	3161.450	3160.535	110	.	613	
CL	II	2938.00	2937.14	4	.	345		CL	II	3161.526	3160.611	15	.	613	
CL	II	2945.88	2945.02	4	.	345		CL	II	3162.340	3161.425	220	11.	613	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CL	III	2435.8	2435.1	200		43		CL	III	2449.32	2448.58	600	17.	38	
CL	III	2436.8	2436.1	500	26.	43		CL	III	2469.12	2468.37	300	13.	38	
CL	III	2440.43	2439.69	500	26.	43		CL	III	2469.94	2469.20	500	13.	43	
CL	III	2443.21	2442.47	500	17.	38		CL	III	2471.81	2471.07	500	14.	43	
CL	III	2447.88	2447.14	600	17.	38		CL	III	2478.04	2477.29	200	13.	38	
								CL	III	2482.52	2481.77	200	13.	38	
								CL	III	2485.02	2484.27	400	13.	38	
								CL	III	2485.8	2485.1	300	.	43	
								CL	III	2487.66	2486.91	500	21.	38	
								CL	III	2491.1	2490.3	500	.	43	
								CL	III	2504.98	2504.23	500	13.	38	
								CL	III	2511.67	2510.92	400	13.	38	
								CL	III	2520.21	2519.45	500	13.	38	
								CL	III	2528.84	2528.08	500	9.	43	
								CL	III	2532.52	2531.76	500	22.	43	
								CL	III	2533.24	2532.48	500	22.	43	
								CL	III	2534.71	2533.95	100	21.	38	
								CL	III	2541.60	2540.84	300	.	43	
								CL	III	2543.41	2542.65	200	13.	38	
								CL	III	2557.00	2556.23	100	.	43	
								CL	III	2558.7	2557.9	300	.	43	
								CL	III	2560.27	2559.50	300	.	43	
								CL	III	2563.29	2562.52	100	21.	38	
								CL	III	2574.90	2574.13	0	.	43	
								CL	III	2577.90	2577.13	500	18.	43	
								CL	III	2579.03	2578.26	600	9.	43	
								CL	III	2581.44	2580.67	600	18.	43	
								CL	III	2589.57	2588.80	300	.	43	
								CL	III	2593.22	2592.45	200	.	43	
								CL	III	2594.74	2593.97	200	.	43	
								CL	III	2601.94	2601.16	400	12.	43	
								CL	III	2604.37	2603.59	500	12.	43	
								CL	III	2605.82	2605.04	200	.	43	
								CL	III	2610.28	2609.50	400	12.	43	
								CL	III	2612.23	2611.45	200	.	43	
								CL	III	2617.75	2616.97	400	12.	43	
								CL	III	2619.56	2618.78	400	12.	43	
								CL	III	2620.83	2620.05	400	23.	43	
								CL	III	2625.49	2624.71	300	23.	43	
								CL	III	2633.45	2632.67	500	23.	43	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CL	III	2633.96	2633.18	500	12.	43	
CL	III	2651.98	2651.19	300	12.	43	
CL	III	2662.44	2661.65	500	16.	38	
CL	III	2663.08	2662.29	300	16.	38	
CL	III	2663.99	2663.20	300	.	43	
CL	III	2666.33	2665.54	600	16.	38	
CL	III	2670.31	2669.52	300	16.	38	
CL	III	2676.2	2675.4	200	.	43	
CL	III	2681.68	2680.88	200	.	43	
CL	III	2683.20	2682.40	300	.	43	
CL	III	2685.56	2684.76	500	25.	43	
CL	III	2686.20	2685.40	400	25.	43	
CL	III	2692.34	2691.52	500	20.	43	
CL	III	2696.32	2695.52	500	16.	38	
CL	III	2700.59	2699.79	100	16.	38	
CL	III	2711.17	2710.37	700	20.	43	
CL	III	2715.17	2714.37	200	.	43	
CL	III	2718.42	2717.62	200	.	43	
CL	III	2724.84	2724.03	500	.	43	
CL	III	2728.5	2727.7	200	.	43	
CL	III	2770.1	2769.3	300	.	43	
CL	III	2797.19	2796.37	100	.	38	
CL	III	2805.99	2805.17	200	.	38	
CL	III	2950.0	2949.1	100	.	43	
CL	III	2966.43	2965.56	600	11.	43	
CL	III	2971.54	2970.67	400	11.	43	
CL	III	2992.69	2991.82	500	11.	43	
CL	III	3105.36	3104.46	600	3.	38	
CL	III	3124.64	3123.74	100	.	43	
CL	III	3140.25	3139.34	800	3.	38	
CL	III	3191.50	3190.58	400	.	43	
CL	III	3192.37	3191.45	900	3.	38	
CL	III	3194.76	3193.84	0	..	43	
CL	III	3231.71	3230.78	100	.	43	
CL	III	3245.37	3244.44	500	6.	38	
CL	III	3245.98	3245.05	200	.	43	
CL	III	3260.26	3259.32	600	6.	38	
CL	III	3266.39	3265.45	0	.	43	
CL	III	3284.36	3283.41	600	2.	38	
CL	III	3290.75	3289.80	700	2.	38	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CL	III	3301.90	3300.95	300	2.	38	
CL	III	3321.52	3320.57	700	6.	38	
CL	III	3330.02	3329.06	800	2.	38	
CL	III	3337.12	3336.16	500	6.	38	
CL	III	3341.38	3340.42	900	2.	38	
CL	III	3343.9	3342.9			108	F
CL	III	3354.29	3353.33			108	F
CL	III	3387.19	3386.22	500	11.	43	
CL	III	3388.57	3387.60	600	2.	38	
CL	III	3393.86	3392.89	800	11.	43	
CL	III	3394.42	3393.45	800	11.	43	
CL	III	3401.12	3400.15	200		43	
CL	IV	2702.16	2701.36	400		43	
CL	IV	2724.84	2724.03	500		43	
CL	IV	2752.04	2751.23	500		43	
CL	IV	2771.46	2770.64	400		43	
CL	IV	2783.29	2782.47	700		43	
CL	IV	2836.23	2835.40	400		43	
CL	IV	3064.02	3063.13	500		43	
CL	IV	3072.25	3071.36	300		43	
CL	IV	3077.57	3076.68	600		43	
CL	IV	3106.99	3106.09	100		43	
CL	IV	3119.56	3118.66			108	F
CL	IV	3168.79	3167.87	200		43	
CL	IV	3204.53	3203.60			108	F
CL	VI	2071.7	2071.0			111	
CL	VI	2142.2	2141.5			92	
CL	VI	2159.2	2158.5			92	
CL	VI	2165.0	2164.3			92	
CL	VI	3136.1	3135.2			111	
CL	VI	3271.0	3270.1			111	
CL	VI	3407.5	3406.5			111	
CL	VII	2212.2	2211.5			92	
CL	VII	2306.8	2306.1			111	
CL	VII	2501.6	2500.8			92	
CL	VII	2522.5	2521.7			92	
CL	VII	3306.2	3305.3			111	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2049.25	2048.59	5		603	
CO	I	2053.48	2052.82	6	36.	603	
CO	I	2053.93	2053.27	6		603	
CO	I	2054.12	2053.46	5		603	
CO	I	2054.73	2054.07	10	34.	603	
CO	I	2056.12	2055.46	4		603	
CO	I	2059.17	2058.51	3		603	
CO	I	2060.56	2059.90	3		603	
CO	I	2062.05	2061.39	6		603	
CO	I	2063.58	2062.92	6		603	
CO	I	2065.52	2064.86	4	86.	603	
CO	I	2066.78	2066.12	0		603	
CO	I	2066.86	2066.22	12	33.	603	
CO	I	2068.08	2067.42	6		603	
CO	I	2068.24	2067.58	5		603	
CO	I	2069.65	2068.99	10	29.	603	
CO	I	2070.57	2069.91	12	36.	603	
CO	I	2072.61	2071.95	4		603	
CO	I	2073.94	2073.27	10	28.	603	
CO	I	2078.10	2077.44	1		603	
CO	I	2078.43	2077.76	25		603	
CO	I	2078.73	2078.06	2		603	
CO	I	2079.98	2079.32	12	34.	603	
CO	I	2080.22	2079.55	M		603	
CO	I	2081.71	2081.04	10	35.	603	
CO	I	2082.78	2082.11	12	31.	603	
CO	I	2084.76	2084.09	10		603	
CO	I	2085.71	2085.04	9	32.	603	
CO	I	2086.34	2085.67	15		603	
CO	I	2088.22	2087.55	15		603	
CO	I	2090.02	2089.35	15	87.	603	
CO	I	2090.34	2089.67	10	25.	603	
CO	I	2090.50	2089.83	10	90.	603	
CO	I	2091.72	2091.05	15	89.	603	
CO	I	2092.07	2091.40	10	29.	603	
CO	I	2092.65	2091.98	12	88.	603	
CO	I	2094.07	2093.40	15	86.	603	
CO	I	2095.53	2094.86	15	86.	603	
CO	I	2096.44	2095.77	15		603	
CO	I	2098.180	2097.511	20		603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2099.611	2098.942	12	28.	603	
CO	I	2100.02	2099.35	10	32.	603	
CO	I	2101.33	2100.66	6		603	
CO	I	2102.37	2101.70	3		603	
CO	I	2103.29	2102.62	10		603	
CO	I	2103.77	2103.10	4		603	
CO	I	2104.52	2103.85	5		603	
CO	I	2105.17	2104.50	12		603	
CO	I	2105.401	2104.730	25		603	
CO	I	2105.69	2105.02	M		603	
CO	I	2107.469	2106.798	25	90.	603	
CO	I	2108.72	2108.05	0		603	
CO	I	2108.83	2108.16	0	28.	603	
CO	I	2109.651	2108.980	15		603	
CO	I	2109.877	2109.206	5		603	
CO	I	2111.56	2110.89	M		603	
CO	I	2111.75	2111.08	5		603	
CO	I	2112.088	2111.416	10	30.	603	
CO	I	2113.07	2112.40	12	83.	603	
CO	I	2113.87	2113.20	3		603	
CO	I	2114.208	2113.536	12	87.	603	
CO	I	2115.08	2114.41	4	83.	603	
CO	I	2116.011	2115.338	12	80.	603	
CO	I	2116.16	2115.49	2		603	
CO	I	2116.96	2116.29	8		603	
CO	I	2117.515	2116.842	10	24.	603	
CO	I	2118.35	2117.68	15	86.	603	
CO	I	2119.178	2118.505	6	80.	603	
CO	I	2119.865	2119.192	5	85.	603	
CO	I	2120.577	2119.904	10	80.	603	
CO	I	2121.378	2120.705	10	28.	603	
CO	I	2122.065	2121.391	3		603	
CO	I	2122.66	2121.99	6		603	
CO	I	2123.31	2122.64	10	77.	603	
CO	I	2124.80	2124.13	8		603	
CO	I	2125.48	2124.80	0		603	
CO	I	2125.790	2125.116	10	84.	603	
CO	I	2125.996	2125.322	5	28.	603	
CO	I	2126.623	2125.949	5	25.	603	
CO	I	2126.874	2126.199	5	83.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2127.822	2127.147	10	80.	603		CO	I	2164.64	2163.96	5		603	
CO	I	2130.183	2129.508	5	30.	603		CO	I	2165.04	2164.36	6		603	
CO	I	2130.951	2130.276	8	27.	603		CO	I	2168.43	2167.75	3		603	
CO	I	2131.59	2130.91	M		603		CO	I	2169.394	2168.711	18	23.	603	
CO	I	2131.727	2131.052	3	29.	603		CO	I	2171.249	2170.565	10	23.	603	
CO	I	2132.51	2131.84	0		603		CO	I	2172.36	2171.68	0		603	
CO	I	2133.443	2132.767	10	23.	603		CO	I	2172.858	2172.175	4	77.	603	
CO	I	2134.78	2134.10	8		603		CO	I	2173.857	2173.173	10	74.	603	
CO	I	2135.60	2134.92	6		603		CO	I	2174.529	2173.845	10	23.	603	
CO	I	2136.27	2135.59	3	26.	603		CO	I	2175.273	2174.589	30	19.	603	
CO	I	2136.474	2135.798	4	29.	603		CO	I	2175.58	2174.90	8		603	
CO	I	2138.06	2137.38	0		603		CO	I	2176.71	2176.03	3		603	
CO	I	2138.457	2137.780	15	28.	603		CO	I	2177.173	2176.494	4	120.	603	
CO	I	2139.648	2138.971	15	28.	603		CO	I	2177.653	2176.968	2		603	
CO	I	2143.02	2142.34	2		603		CO	I	2178.74	2178.06	8		603	
CO	I	2144.357	2143.679	3	28.	603		CO	I	2179.28	2178.59	25		603	
CO	I	2146.13	2145.45	12	79.	603		CO	I	2180.745	2180.060	10	20.	603	
CO	I	2146.942	2146.264	12	23.	603		CO	I	2180.92	2180.23	7		603	
CO	I	2147.33	2146.65	0		603		CO	I	2181.806	2181.121	12	120.	603	
CO	I	2148.45	2147.77	5		603		CO	I	2183.273	2182.587	15	23.	603	
CO	I	2149.387	2148.708	6	27.	603		CO	I	2184.02	2183.33	3		603	
CO	I	2150.79	2150.11	5		603		CO	I	2185.000	2184.314	8	17.	603	
CO	I	2151.94	2151.26	2		603		CO	I	2185.636	2184.950	10	118.	603	
CO	I	2152.37	2151.69	3		603		CO	I	2186.716	2186.030	3	81.	603	
CO	I	2152.828	2152.148	10	78.	603		CO	I	2187.14	2186.45	8	24.	603	
CO	I	2153.51	2152.83	2		603		CO	I	2187.461	2186.777	12	73.	603	
CO	I	2154.18	2153.50	12		603		CO	I	2187.971	2187.284	5	75.	603	
CO	I	2154.754	2154.074	10	24.	603		CO	I	2190.036	2189.350	3	119.	603	
CO	I	2154.92	2154.24	3		603		CO	I	2191.85	2191.16	3		603	
CO	I	2155.97	2155.29	12		603		CO	I	2195.86	2195.17	2		603	
CO	I	2157.01	2156.33	5		603		CO	I	2196.71	2196.02	3		603	
CO	I	2157.88	2157.20	5		603		CO	I	2197.146	2196.458	15	19.	603	
CO	I	2158.98	2158.30	8		603		CO	I	2197.593	2196.904	3		603	
CO	I	2159.223	2158.542	10	24.	603		CO	I	2198.03	2197.34	8		603	
CO	I	2159.55	2158.87	4		603		CO	I	2198.322	2197.633	5		603	
CO	I	2162.26	2161.58	3		603		CO	I	2198.67	2197.98	3		603	
CO	I	2162.878	2162.196	6	82.	603		CO	I	2199.453	2198.764	2	23.	603	
CO	I	2163.716	2163.034	15	26.	603		CO	I	2201.924	2201.235	4	76.	603	
CO	I	2164.256	2163.574	12	23.	603		CO	I	2202.10	2201.41	6		603	
CO	I	2164.46	2163.78	3		603		CO	I	2202.24	2201.55	6		603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	I	2202.48	2201.79	4		603		CO	I	2248.57	2247.86	4		603	
CO	I	2203.28	2202.59	3		603		CO	I	2249.50	2248.80	1		603	
CO	I	2204.22	2203.53	4		603		CO	I	2249.679	2248.981	5	19.	603	
CO	I	2204.65	2203.96	3		603		CO	I	2251.196	2250.496	10	117.	603	
CO	I	2205.486	2204.796	18	74.	603		CO	I	2252.53	2251.83	8	14.	603	
CO	I	2208.388	2207.697	10	22.	603		CO	I	2253.412	2252.712	10	20.	603	
CO	I	2208.544	2207.853	9	22.	603		CO	I	2254.287	2253.587	3		603	
CO	I	2209.199	2208.508	12	20.	603		CO	I	2254.476	2253.776	10	64.	603	
CO	I	2211.58	2210.89	2		603		CO	I	2255.52	2254.82	10		603	
CO	I	2212.92	2212.23	15		603		CO	I	2257.266	2256.565	10	67.	603	
CO	I	2213.045	2212.354	9	18.	603		CO	I	2258.283	2257.582	10	16.	603	
CO	I	2214.511	2213.819	7		603		CO	I	2259.029	2258.328	9		603	
CO	I	2214.55	2213.86	4	19.	603		CO	I	2262.77	2262.07	0		603	
CO	I	2219.506	2218.813	10	73.	603		CO	I	2263.294	2262.592	10	14.	603	
CO	I	2219.847	2219.154	9	16.	603		CO	I	2265.11	2264.41	10		603	
CO	I	2224.67	2223.97	0		603		CO	I	2265.582	2264.880	15	70.	603	
CO	I	2226.044	2225.350	12	19.	603		CO	I	2267.816	2267.113	12	18.	603	
CO	I	2226.542	2225.848	5	120.	603		CO	I	2268.866	2268.163	15	67.	603	
CO	I	2228.361	2227.666	12	22.	603		CO	I	2269.445	2268.742	12	69.	603	
CO	I	2228.548	2227.853	10	16.	603		CO	I	2274.28	2273.58	2		603	
CO	I	2229.029	2228.334	4		603		CO	I	2275.199	2274.495	9	14.	603	
CO	I	2229.501	2228.806	12	19.	603		CO	I	2275.322	2274.617	8	72.	603	
CO	I	2230.429	2229.734	10	68.	603		CO	I	2276.589	2275.884	9	68.	603	
CO	I	2230.76	2230.07	8		603		CO	I	2277.228	2276.523	20		603	
CO	I	2232.444	2231.749	6		603		CO	I	2279.003	2278.298	9	16.	603	
CO	I	2233.156	2232.460	8	20.	603		CO	I	2280.186	2279.480	15	67.	603	
CO	I	2233.57	2232.88	4		603		CO	I	2280.633	2279.927	10	11.	603	
CO	I	2233.795	2233.099	9		603		CO	I	2282.05	2281.34	5		603	
CO	I	2234.455	2233.759	10	21.	603		CO	I	2285.074	2284.375	8	71.	603	
CO	I	2235.406	2234.710	12	67.	603		CO	I	2285.52	2284.81	3		603	
CO	I	2237.493	2236.796	15	19.	603		CO	I	2285.57	2284.86	30	14.	603	
CO	I	2237.822	2237.125	10	70.	603		CO	I	2286.115	2285.408	12	63.	603	
CO	I	2239.99	2239.30	1		603		CO	I	2288.511	2287.804	12	64.	603	
CO	I	2241.44	2240.74	6		603		CO	I	2289.482	2288.774	15	69.	603	
CO	I	2242.35	2241.65	9		603		CO	I	2290.203	2289.495	9	15.	603	
CO	I	2243.951	2243.254	10	19.	603		CO	I	2291.249	2290.541	10	66.	603	
CO	I	2244.82	2244.12	5		603		CO	I	2292.158	2291.450	12	68.	603	
CO	I	2246.160	2245.463	10	19.	603		CO	I	2294.712	2294.003	10	14.	603	
CO	I	2246.299	2245.600	10		603		CO	I	2295.932	2295.223	15	12.	603	
CO	I	2247.297	2246.599	25	18.	603		CO	I	2296.747	2296.038	18	68.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	I	2297.413	2296.704	18	67.	603		CO	I	2341.71	2340.99	5		603	
CO	I	2299.066	2298.356	15	67.	603		CO	I	2342.503	2341.784	4		603	
CO	I	2304.03	2303.31	M		603		CO	I	2343.512	2342.793	2		603	
CO	I	2304.214	2303.504	9	10.	603		CO	I	2346.881	2346.161	7	12.	603	
CO	I	2304.676	2303.966	12	62.	603		CO	I	2348.377	2347.657	4	10.	603	
CO	I	2304.893	2304.182	10	11.	603		CO	I	2351.005	2350.284	12	63.	603	
CO	I	2305.880	2305.169	15	14.	603		CO	I	2351.317	2350.596	6		603	
CO	I	2309.69	2308.98	M		603		CO	I	2352.105	2351.385	10	13.	603	
CO	I	2309.731	2309.020	10	11.	603		CO	I	2352.70	2351.98	4		603	
CO	I	2311.07	2310.36	1		603		CO	I	2353.585	2352.864	15	60.	603	
CO	I	2311.674	2310.962	12		603		CO	I	2354.08	2353.36	10	11.	603	
CO	I	2312.06	2311.35	10	62.	603		CO	I	2354.90	2354.18	2		603	
CO	I	2316.87	2316.157	10	14.	603		CO	I	2355.13	2354.41	5		603	
CO	I	2317.446	2316.733	5		603		CO	I	2356.202	2355.480	30	11.	603	
CO	I	2317.556	2316.843	5	11.	603		CO	I	2356.333	2355.611	7	63.	603	
CO	I	2318.229	2317.516	5		603		CO	I	2356.989	2356.267	10	10.	603	
CO	I	2319.866	2319.152	4	13.	603		CO	I	2358.229	2357.507	10	114.	603	
CO	I	2321.13	2320.41	1		603		CO	I	2358.899	2358.177	20	11.	603	
CO	I	2321.620	2320.906	4	15.	603		CO	I	2359.398	2358.676	10	6.	603	
CO	I	2322.974	2322.260	4	15.	603		CO	I	2361.512	2360.789	9	116.	603	
CO	I	2323.846	2323.131	15	11.	603		CO	I	2363.050	2362.327	8	62.	603	
CO	I	2326.245	2325.530	12	14.	603		CO	I	2364.974	2364.251	3		603	
CO	I	2326.330	2325.615	50	63.	603		CO	I	2365.781	2365.057	18	6.	603	
CO	I	2326.52	2325.80	6		603		CO	I	2366.770	2366.046	5		603	
CO	I	2328.255	2327.539	5	65.	603		CO	I	2370.398	2369.674	15	60.	603	
CO	I	2329.014	2328.298	6		603		CO	I	2370.649	2369.924	9	62.	603	
CO	I	2329.577	2328.861	10		603		CO	I	2371.239	2370.514	10	8.	603	
CO	I	2329.805	2329.089	6		603		CO	I	2372.183	2371.458	15	133.	603	
CO	I	2332.803	2332.087	10		603		CO	I	2372.570	2371.845	6	12.	603	
CO	I	2333.788	2333.071	6	15.	603		CO	I	2373.557	2372.832	15	9.	603	
CO	I	2334.697	2333.980	3		603		CO	I	2374.096	2373.370	20		603	
CO	I	2334.83	2334.12	5		603		CO	I	2374.29	2373.56	0		603	
CO	I	2335.819	2335.102	15	6.	603		CO	I	2374.587	2373.862	9	13.	603	
CO	I	2336.72	2336.00	10	11.	603		CO	I	2375.182	2374.456	4		603	
CO	I	2338.195	2337.477	4		603		CO	I	2377.701	2376.975	6		603	
CO	I	2338.67	2337.95	3	14.	603		CO	I	2377.941	2377.215	12	63.	603	
CO	I	2339.374	2338.656	10	11.	603		CO	I	2379.632	2378.905	5	125.	603	
CO	I	2339.766	2339.048	4	12.	603		CO	I	2379.887	2379.160	4	12.	603	
CO	I	2340.268	2339.550	5	62.	603		CO	I	2380.084	2379.357	4		603	
CO	I	2340.63	2339.92	M		603		CO	I	2381.210	2380.483	20	6.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	I	2381.423	2380.696	4	10.	603		CO	I	2413.921	2413.187	15	60.	603	
CO	I	2381.98	2381.26	4		603		CO	I	2414.314	2413.580	15	125.	603	
CO	I	2385.586	2384.858	10	5.	603		CO	I	2415.193	2414.458	40	6.	603	
CO	I	2386.541	2385.813	9		603		CO	I	2416.03	2415.29	4	6.	603	
CO	I	2387.238	2386.509	3		603		CO	I	2416.05	2415.32	2		603	
CO	I	2388.189	2387.460	10		603		CO	I	2416.251	2415.516	3		603	
CO	I	2388.903	2388.175	5	59.	603		CO	I	2417.780	2417.045	10		603	
CO	I	2389.103	2388.374	3	10.	603		CO	I	2418.064	2417.329	25		603	
CO	I	2390.269	2389.540	12	10.	603	H	CO	I	2419.212	2418.476	1		603	
CO	I	2390.713	2389.984	8	60.	603		CO	I	2419.315	2418.580	1		603	
CO	I	2391.155	2390.426	4		602		CO	I	2419.857	2419.122	20		603	
CO	I	2392.098	2391.369	9		603		CO	I	2420.059	2419.324	10		603	
CO	I	2392.75	2392.029	1	6.	603		CO	I	2420.564	2419.828	6	59.	603	
CO	I	2394.365	2393.635	1		603		CO	I	2422.424	2421.688	8	60.	603	
CO	I	2394.957	2394.227	4		603		CO	I	2423.304	2422.568	30	123.	603	
CO	I	2396.120	2395.390	6		603		CO	I	2425.669	2424.932	250	5.	603	
CO	I	2396.962	2396.232	10	132.	603		CO	I	2426.330	2425.593	8	59.	603	
CO	I	2397.319	2396.588	5	124.	603		CO	I	2427.734	2426.997	12		603	
CO	I	2397.509	2396.779	90		603		CO	I	2429.334	2428.596	10		603	
CO	I	2397.76	2397.03	6		603		CO	I	2429.964	2429.226	25	7.	603	
CO	I	2397.98	2397.25	4		603		CO	I	2430.914	2430.176	10		603	
CO	I	2399.285	2398.554	4		603		CO	I	2432.48	2431.74	1		603	
CO	I	2401.290	2400.558	30	115.	603		CO	I	2432.952	2432.213	40	5.	603	
CO	I	2401.565	2400.833	30	60.	603		CO	I	2434.49	2433.75	0		603	
CO	I	2401.833	2401.102	30		603		CO	I	2435.833	2435.094	20		603	
CO	I	2402.327	2401.595	30	10.	603		CO	I	2435.889	2435.151	M		825	
CO	I	2402.790	2402.058	10	5.	603		CO	I	2436.562	2435.823	10		603	
CO	I	2402.895	2402.164	30	12.	603		CO	I	2437.397	2436.657	50	5.	603	
CO	I	2403.291	2402.559	15	61.	603		CO	I	2437.526	2436.786	3		603	
CO	I	2404.069	2403.337	15		603		CO	I	2438.941	2438.201	1		603	
CO	I	2404.369	2403.637	15		603		CO	I	2439.151	2438.411	2		603	
CO	I	2405.58	2404.84	10	60.	603		CO	I	2439.778	2439.038	20	5.	603	
CO	I	2406.998	2406.266	25	58.	603		CO	I	2440.235	2439.495	8		603	
CO	I	2407.980	2407.249	100	6.	603		CO	I	2440.881	2440.141	4		603	
CO	I	2409.856	2409.123	20		603		CO	I	2441.780	2441.040	20	132.	603	
CO	I	2410.387	2409.654	8		603		CO	I	2443.36	2442.62	2		603	
CO	I	2411.238	2410.504	40	124.	603		CO	I	2443.629	2442.888	4		603	
CO	I	2412.352	2411.618	250	6.	603		CO	I	2443.92	2443.18	0		603	
CO	I	2413.496	2412.762	12	10.	603		CO	I	2444.289	2443.548	5	57.	603	
CO	I	2413.630	2412.896	6		603		CO	I	2446.094	2445.353	2		603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2446.498	2445.756	3		603		CO	I	2503.038	2502.284	5		603	
CO	I	2449.247	2448.505	2		603		CO	I	2503.99	2503.24	1		603	
CO	I	2451.980	2451.237	1		603		CO	I	2504.615	2503.860	1		603	
CO	I	2452.490	2451.747	3		603		CO	I	2505.272	2504.518	4	55.	603	
CO	I	2454.125	2453.382	4		603		CO	I	2505.862	2505.107	3		603	
CO	I	2456.981	2456.237	20	57.	603		CO	I	2507.628	2506.873	10	57.	603	
CO	I	2460.939	2460.195	20		603		CO	I	2507.924	2507.169	2		603	
CO	I	2461.545	2460.800	20	5.	603		CO	I	2508.433	2507.678	40	56.	603	
CO	I	2462.307	2461.562	2		603		CO	I	2509.486	2508.730	1		603	
CO	I	2462.867	2462.122	20		603		CO	I	2509.990	2509.234	2		603	
CO	I	2464.521	2463.776	4	7.	603		CO	I	2510.86	2510.10	0		603	
CO	I	2465.204	2464.459	2		603		CO	I	2511.775	2511.019	10	56.	603	
CO	I	2465.360	2464.615	3	7.	603		CO	I	2513.657	2512.900	5	113.	603	
CO	I	2465.857	2465.111	3		603		CO	I	2513.875	2513.119	4		603	
CO	I	2468.432	2467.685	20	5.	603		CO	I	2515.832	2515.075	1		603	
CO	I	2471.017	2470.270	20	57.	603		CO	I	2518.550	2517.792	6	56.	603	
CO	I	2472.813	2472.066	3		603		CO	I	2518.627	2517.869	10	57.	603	
CO	I	2473.670	2472.922	7	57.	603		CO	I	2519.746	2518.988	3	113.	603	
CO	I	2474.649	2473.901	8	5.	603		CO	I	2521.667	2520.908	3		603	
CO	I	2475.450	2474.702	5		603		CO	I	2522.122	2521.363	75	3.	603	
CO	I	2477.18	2476.43	1		603		CO	I	2523.76	2523.00	4		603	
CO	I	2477.388	2476.640	40	56.	603		CO	I	2526.386	2525.626	4		603	
CO	I	2479.042	2478.293	2		603		CO	I	2528.946	2528.186	3		603	
CO	I	2481.84	2481.09	0		603		CO	I	2529.727	2528.967	50	3.	603	
CO	I	2484.363	2483.613	12	57.	603		CO	I	2530.895	2530.134	40	56.	603	
CO	I	2486.702	2485.952	1		603		CO	I	2531.307	2530.546	5		603	
CO	I	2489.212	2488.461	4	7.	603		CO	I	2532.115	2531.354	5	57.	603	
CO	I	2490.000	2489.249	4	7.	603		CO	I	2532.937	2532.176	10	56.	603	
CO	I	2490.258	2489.507	1		603		CO	I	2536.121	2535.359	5		603	
CO	I	2490.37	2489.62	3		603		CO	I	2536.723	2535.961	10	3.	603	
CO	I	2490.77	2490.02	0		603		CO	I	2537.265	2536.503	1		603	
CO	I	2491.90	2491.15	1		603		CO	I	2539.101	2538.339	6		603	
CO	I	2494.682	2493.930	30		603		CO	I	2539.46	2538.70	1		603	
CO	I	2495.482	2494.730	9		603		CO	I	2543.995	2543.232	1		603	
CO	I	2496.304	2495.551	10	56.	603		CO	I	2545.016	2544.252	50	3.	603	
CO	I	2497.20	2496.45	1		603		CO	I	2545.626	2544.862	4		603	
CO	I	2497.466	2496.713	12	57.	603		CO	I	2548.958	2548.194	0		603	
CO	I	2501.247	2500.494	10		603		CO	I	2549.098	2548.333	20	12.	603	
CO	I	2502.011	2501.257	2		603		CO	I	2549.640	2548.875	3		603	
CO	I	2502.262	2501.508	2		603		CO	I	2550.061	2549.296	4	4.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2551.995	2551.230	0		603		CO	I	2614.903	2614.124	30	3.	603	
CO	I	2553.770	2553.004	40	56.	603		CO	I	2616.116	2615.336	40		603	
CO	I	2554.103	2553.337	10	56.	603		CO	I	2617.040	2616.260	40	112.	603	
CO	I	2555.840	2555.074	6	56.	603		CO	I	2618.639	2617.859	50		603	
CO	I	2557.528	2556.762	50	55.	603		CO	I	2620.057	2619.276	50		603	
CO	I	2560.362	2559.595	0		603		CO	I	2622.840	2622.059	40	54.	603	
CO	I	2560.794	2560.027	1		603		CO	I	2623.031	2622.250	3	54.	603	
CO	I	2562.048	2561.280	25		603		CO	I	2623.212	2622.430	30	54.	603	
CO	I	2562.892	2562.124	10	3.	603		CO	I	2624.221	2623.440	2	53.	603	
CO	I	2565.334	2564.566	0		603		CO	I	2624.536	2623.755	40		603	
CO	I	2566.754	2565.985	1		603		CO	I	2624.74	2623.96	5		603	
CO	I	2568.113	2567.344	50	3.	603		CO	I	2625.577	2624.795	1		603	
CO	I	2568.511	2567.742	1		603		CO	I	2626.904	2626.122	1		603	
CO	I	2571.532	2570.762	1		603		CO	I	2627.814	2627.031	2		603	
CO	I	2573.004	2572.234	50		603		CO	I	2628.421	2627.638	50	54.	603	
CO	I	2574.165	2573.395	40		603		CO	I	2629.544	2628.761	3		603	
CO	I	2574.308	2573.538	30		603		CO	I	2630.753	2629.970	30		603	
CO	I	2575.121	2574.351	6	3.	603		CO	I	2631.999	2631.215	1		603	
CO	I	2576.503	2575.733	2		603		CO	I	2633.68	2632.89	3		603	
CO	I	2578.217	2577.446	1		603		CO	I	2637.150	2636.365	5		603	
CO	I	2579.696	2578.924	30		603		CO	I	2643.670	2642.884	10		603	
CO	I	2581.610	2580.838	50		603		CO	I	2645.559	2644.772	10	111.	603	
CO	I	2583.81	2583.03	3		603		CO	I	2647.200	2646.413	10	53.	603	
CO	I	2586.108	2585.335	50	113.	603		CO	I	2649.423	2648.635	5	53.	603	
CO	I	2590.07	2589.30	00		603		CO	I	2650.719	2649.931	50	112.	603	
CO	I	2591.368	2590.594	75	110.	603		CO	I	2651.054	2650.266	50	53.	603	
CO	I	2592.460	2591.686	10	55.	603		CO	I	2658.129	2657.340	0		603	
CO	I	2593.337	2592.563	0		603		CO	I	2662.505	2661.714	2		603	
CO	I	2593.845	2593.070	1		603		CO	I	2668.88	2668.08	1		603	
CO	I	2594.936	2594.161	10	3.	603		CO	I	2670.367	2669.575	2		603	
CO	I	2595.989	2595.214	1		603		CO	I	2674.711	2673.918	25		603	
CO	I	2596.761	2595.986	0		603		CO	I	2676.340	2675.546	1		603	
CO	I	2599.976	2599.200	5		603		CO	I	2676.774	2675.980	10	53.	603	
CO	I	2601.753	2600.977	10	53.	603		CO	I	2677.815	2677.021	0		603	
CO	I	2603.358	2602.581	1		603		CO	I	2680.546	2679.751	75	110.	603	
CO	I	2606.898	2606.120	40	55.	603		CO	I	2680.899	2680.104	25		603	
CO	I	2609.678	2608.900	1		603		CO	I	2686.132	2685.336	75	53.	603	
CO	I	2611.541	2610.762	40	53.	603		CO	I	2693.277	2692.479	1		603	
CO	I	2614.271	2613.492	25		603		CO	I	2695.190	2694.392	25		603	
CO	I	2614.674	2613.894	4		603		CO	I	2696.645	2695.846	50	53.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CO	I	2701.098	2700.298	1		603		CO	I	2786.719	2785.899	50	137.	603	
CO	I	2706.213	2705.412	3		603		CO	I	2787.836	2787.016	5		603	
CO	I	2706.644	2705.843	15		603		CO	I	2791.105	2790.284	30		603	
CO	I	2708.79	2707.99	1		603		CO	I	2791.830	2791.009	50	128.	603	
CO	I	2709.611	2708.810	30		603		CO	I	2792.252	2791.430	2		603	
CO	I	2710.09	2709.29	0		603		CO	I	2793.258	2792.436	40	107.	603	
CO	I	2716.790	2715.987	75	131.	603		CO	I	2796.642	2795.819	15		603	
CO	I	2720.385	2719.581	25	108.	603		CO	I	2797.051	2796.228	50	52.	603	
CO	I	2722.911	2722.106	50	140.	603		CO	I	2797.904	2797.081	50	108.	603	
CO	I	2723.85	2723.05	0		603		CO	I	2800.19	2799.37	0		603	
CO	I	2729.560	2728.754	3		603		CO	I	2801.24	2800.42	00		603	
CO	I	2731.919	2731.112	50	140.	603		CO	I	2804.594	2803.770	100	52.	603	
CO	I	2733.653	2732.848	2		603		CO	I	2804.922	2804.098	5		603	
CO	I	2741.266	2740.457	50	109.	603		CO	I	2811.952	2811.126	50		603	
CO	I	2745.908	2745.098	50	140.	603		CO	I	2812.334	2811.508	50	126.	603	
CO	I	2746.838	2746.028	50	108.	603		CO	I	2813.276	2812.449	3		603	
CO	I	2750.952	2750.141	15		603		CO	I	2815.803	2814.976	25	1.	603	
CO	I	2752.882	2752.070	40	138.	603		CO	I	2816.383	2815.555	50	52.	603	
CO	I	2755.08	2754.26	1		603		CO	I	2819.420	2818.592	30	2.	603	
CO	I	2759.351	2758.538	30	128.	603		CO	I	2820.002	2819.174	10		603	
CO	I	2762.180	2761.366	75	52.	603		CO	I	2820.831	2820.002	50	1.	603	
CO	I	2763.876	2763.062	1		603		CO	I	2822.574	2821.745	30		603	
CO	I	2765.003	2764.188	100	52.	603		CO	I	2824.476	2823.647	5		603	
CO	I	2767.030	2766.215	50	131.	603		CO	I	2825.28	2824.45	1		603	
CO	I	2767.197	2766.382	50	52.	603		CO	I	2825.45	2824.62	1		603	
CO	I	2769.110	2768.294	9		603		CO	I	2825.980	2825.153	75		603	
CO	I	2769.502	2768.686	20		603		CO	I	2826.72	2825.89	0		603	
CO	I	2770.475	2769.659	10		603		CO	I	2827.627	2826.797	50	126.	603	
CO	I	2770.92	2770.10	0		603		CO	I	2829.296	2828.466	15		603	
CO	I	2772.140	2771.324	1		603		CO	I	2834.754	2833.922	40	2.	603	
CO	I	2772.514	2771.697	9	126.	603		CO	I	2835.260	2834.428	50	52.	603	
CO	I	2773.358	2772.541	15		603		CO	I	2837.47	2836.64	0		603	
CO	I	2773.509	2772.692	30	139.	603		CO	I	2837.986	2837.154	75	137.	603	
CO	I	2774.50	2773.68	3		603		CO	I	2843.216	2842.382	30	127.	603	
CO	I	2775.778	2774.960	50	52.	603		CO	I	2849.44	2848.61	0		603	
CO	I	2776.396	2775.578	50	138.	603		CO	I	2850.22	2849.38	2		603	
CO	I	2779.632	2778.813	75	128.	603		CO	I	2850.882	2850.047	75	106.	603	
CO	I	2781.852	2781.032	8		603		CO	I	2851.782	2850.947	30	2.	603	
CO	I	2782.93	2782.11	0		603		CO	I	2852.58	2851.74	2		603	
CO	I	2783.077	2782.258	3		603		CO	I	2856.88	2856.04	1		603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CO	I	2857.82	2856.98	0		603		CO	I	2906.425	2905.576	1		603	
CO	I	2858.04	2857.21	1		603		CO	I	2908.520	2907.670	1		603	
CO	I	2858.82	2857.98	0		603		CO	I	2910.834	2909.984	4		603	
CO	I	2860.492	2859.654	40	52.	603		CO	I	2911.16	2910.31	1		603	
CO	I	2862.189	2861.351	15		603		CO	I	2912.410	2911.560	5		603	
CO	I	2863.441	2862.602	50	1.	603		CO	I	2912.820	2911.970	5		603	
CO	I	2863.606	2862.768	9		603		CO	I	2915.460	2914.608	7	141.	603	
CO	I	2864.377	2863.538	3		603		CO	I	2916.892	2916.041	1		603	
CO	I	2868.303	2867.463	4		603		CO	I	2917.97	2917.12	1		603	
CO	I	2871.346	2870.506	3		603		CO	I	2920.405	2919.552	30	134.	603	
CO	I	2871.90	2871.06	1		603		CO	I	2928.522	2927.667	50	136.	603	
CO	I	2873.338	2872.497	15	107.	603		CO	I	2928.825	2927.970	4		603	
CO	I	2874.16	2873.32	5		603		CO	I	2929.603	2928.812	50		603	
CO	I	2875.037	2874.196	4	107.	603		CO	I	2930.360	2929.505	75	129.	603	
CO	I	2876.280	2875.438	2		603		CO	I	2934.870	2934.014	5		603	
CO	I	2877.225	2876.383	3		603		CO	I	2937.403	2936.546	1		603	
CO	I	2877.66	2876.82	2		603		CO	I	2942.039	2941.182	1		603	
CO	I	2877.71	2876.86	2		603		CO	I	2942.850	2941.993	1		603	
CO	I	2879.401	2878.558	12	127.	603		CO	I	2943.482	2942.624	1		603	
CO	I	2880.455	2879.612	25		603		CO	I	2944.337	2943.479	30	135.	603	
CO	I	2882.719	2881.876	5	137.	603		CO	I	2945.44	2944.58	2		603	
CO	I	2883.062	2882.219	30	141.	603		CO	I	2946.87	2946.01	0		603	
CO	I	2884.445	2883.602	15	135.	603		CO	I	2949.16	2948.30	2		603	
CO	I	2884.918	2884.074	1		603		CO	I	2949.35	2948.49	1		603	
CO	I	2886.151	2885.307	3		603		CO	I	2952.55	2951.69	1		603	
CO	I	2887.289	2886.444	50	1.	603		CO	I	2955.69	2954.83	1		603	
CO	I	2887.70	2886.86	2		603		CO	I	2956.243	2955.382	30		603	
CO	I	2887.99	2887.14	1		603		CO	I	2958.533	2957.672	50	134.	603	
CO	I	2890.691	2889.845	3		603		CO	I	2960.02	2959.16	1		603	
CO	I	2893.087	2892.242	25		603		CO	I	2970.11	2969.24	2		603	
CO	I	2896.181	2895.335	4		603		CO	I	2970.481	2969.617	1		603	
CO	I	2896.331	2895.485	20		603		CO	I	2970.66	2969.79	1		603	
CO	I	2896.738	2895.991	3		603		CO	I	2972.229	2971.363	1		603	
CO	I	2900.58	2899.73	4		603		CO	I	2973.16	2972.30	0		603	
CO	I	2900.667	2899.819	25		603		CO	I	2973.80	2972.93	1		603	
CO	I	2902.38	2901.53	1		603		CO	I	2973.988	2973.123	1		603	
CO	I	2904.046	2903.197	25	130.	603		CO	I	2976.22	2975.35	1		603	
CO	I	2905.139	2904.290	2		603		CO	I	2976.330	2975.464	4		603	
CO	I	2905.981	2905.132	3		603		CO	I	2978.328	2977.462	1		603	
CO	I	2906.345	2905.496	1		603		CO	I	2978.877	2978.010	30		603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	I	2979.817	2978.950	1		603		CO	I	3043.364	3042.481	8	10.	603	
CO	I	2983.130	2982.262	1		603		CO	I	3044.887	3044.004	30	11.	603	
CO	I	2984.37	2983.50	2		603		CO	I	3048.992	3048.108	2	77.	603	
CO	I	2984.55	2983.68	0		603		CO	I	3049.772	3048.888	12	11.	603	
CO	I	2986.97	2986.10	0		603		CO	I	3051.381	3050.496	3	77.	603	
CO	I	2988.035	2987.166	15	11.	603		CO	I	3051.816	3050.932	60	51.	603	
CO	I	2990.459	2989.590	15	13.	603		CO	I	3055.017	3054.132	18		603	
CO	I	2991.38	2990.51	4		603		CO	I	3055.610	3054.724	4	13.	603	
CO	I	2996.021	2995.150	50	129.	603		CO	I	3057.554	3056.668	2		603	
CO	I	2996.119	2995.248	1		603		CO	I	3060.935	3060.048	5	77.	603	
CO	I	2997.420	2996.549	1	77.	603		CO	I	3061.900	3061.013	1		603	
CO	I	2997.63	2996.76	2		603		CO	I	3062.709	3061.822	20	11.	603	
CO	I	2997.816	2996.945	1		603		CO	I	3062.871	3061.983	1	52.	603	
CO	I	2998.95	2998.08	3		603		CO	I	3063.086	3062.199	5	12.	603	
CO	I	3000.586	2999.714	1		603		CO	I	3063.35	3062.46	1		603	
CO	I	3001.418	3000.545	7	13.	603		CO	I	3064.14	3063.25	1	50.	603	
CO	I	3006.640	3005.766	3	77.	603		CO	I	3065.258	3064.370	5	13.	603	
CO	I	3006.847	3005.974	2		603		CO	I	3069.921	3069.032	1		603	
CO	I	3007.397	3006.523	1		603		CO	I	3071.23	3070.34	1		603	
CO	I	3008.47	3007.59	1		603		CO	I	3071.440	3070.550	1		603	
CO	I	3010.88	3010.01	0		603		CO	I	3071.642	3070.752	5		603	
CO	I	3014.467	3013.592	8	10.	603		CO	I	3071.746	3070.857	1		603	
CO	I	3016.562	3015.686	3	76.	603		CO	I	3072.847	3071.957	6	12.	603	
CO	I	3018.131	3017.254	3	78.	603		CO	I	3073.231	3072.341	15	11.	603	
CO	I	3018.424	3017.548	15	11.	603		CO	I	3073.554	3072.664	20	125.	603	
CO	I	3021.73	3020.85	2		603		CO	I	3074.411	3073.520	3	51.	603	
CO	I	3021.84	3020.96	1		603		CO	I	3080.286	3079.394	5	10.	603	
CO	I	3023.232	3022.355	3		603		CO	I	3083.507	3082.614	12	10.	603	
CO	I	3023.99	3023.11	0		603		CO	I	3083.737	3082.844	2	73.	603	
CO	I	3024.468	3023.590	1		603		CO	I	3084.641	3083.749	1		603	
CO	I	3025.278	3024.400	1	52.	603		CO	I	3086.54	3085.65	3		603	
CO	I	3027.252	3026.373	6	77.	603		CO	I	3087.287	3086.393	4	50.	603	
CO	I	3029.063	3028.184	1		603		CO	I	3087.670	3086.777	15	11.	603	
CO	I	3032.168	3031.288	2		603		CO	I	3087.73	3086.83	1	76.	603	
CO	I	3032.39	3031.51	0		603		CO	I	3088.24	3087.35	2		603	
CO	I	3034.97	3034.08	1		603		CO	I	3088.699	3087.806	3	77.	603	
CO	I	3035.313	3034.432	6	12.	603		CO	I	3089.569	3088.676	1		603	
CO	I	3039.184	3038.302	2		603		CO	I	3090.490	3089.596	10	10.	603	
CO	I	3040.444	3039.563	3	52.	603		CO	I	3091.145	3090.251	4	77.	603	
CO	I	3041.694	3040.812	1	50.	603		CO	I	3096.612	3095.716	3	49.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CO	I	3097.298	3096.402	3	52.	603		CO	I	3138.360	3137.454	3	108.	603	
CO	I	3097.601	3096.705	2		603		CO	I	3138.661	3137.755	4	49.	603	
CO	I	3099.091	3098.194	10	10.	603		CO	I	3139.27	3138.36	2		603	
CO	I	3100.564	3099.667	2	75.	603		CO	I	3139.799	3138.893	1		603	
CO	I	3101.04	3100.15	6		603		CO	I	3140.853	3139.947	12	9.	603	
CO	I	3101.23	3100.33	5		603		CO	I	3141.622	3140.715	2	75.	603	
CO	I	3103.302	3102.405	4	49.	603		CO	I	3144.72	3143.81	2		603	
CO	I	3104.633	3103.735	5	73.	603		CO	I	3145.930	3145.022	3	50.	603	
CO	I	3104.881	3103.983	5	48.	603		CO	I	3146.40	3145.49	15		603	
CO	I	3106.827	3105.929	3	26.	603		CO	I	3147.968	3147.060	15	10.	603	
CO	I	3107.040	3106.142	1		603		CO	I	3150.219	3149.310	10	9.	603	
CO	I	3107.943	3107.044	3	49.	603		CO	I	3151.565	3150.655	2		603	
CO	I	3108.459	3107.540	1	125.	603		CO	I	3151.729	3150.819	2		603	
CO	I	3109.124	3108.223	1		603		CO	I	3153.029	3152.120	1		603	
CO	I	3109.38	3108.48	1		603		CO	I	3153.617	3152.707	6	73.	603	
CO	I	3110.405	3109.506	4	50.	603		CO	I	3154.602	3153.692	1	7.	603	
CO	I	3110.920	3110.021	5	109.	603		CO	I	3155.588	3154.678	5	108.	603	
CO	I	3111.52	3110.62	5		603		CO	I	3155.704	3154.794	10	73.	603	
CO	I	3111.721	3110.821	5	11.	603		CO	I	3158.001	3157.090	1		603	
CO	I	3112.239	3111.339	2	73.	603		CO	I	3159.204	3158.293	1	12.	603	
CO	I	3114.373	3113.473	6	48.	603		CO	I	3159.369	3158.458	1		603	
CO	I	3115.018	3114.118	10	49.	603		CO	I	3159.683	3158.772	12	10.	603	
CO	I	3117.65	3116.75	1		603		CO	I	3160.573	3159.662	10	9.	603	
CO	I	3119.151	3118.249	5	11	603		CO	I	3162.564	3161.652	5	73.	603	
CO	I	3119.537	3118.636	1	12.	603		CO	I	3168.973	3168.060	6	108.	603	
CO	I	3120.056	3119.154	1		603		CO	I	3170.681	3169.766	9	109.	603	
CO	I	3121.00	3120.10	3	74.	603		CO	I	3174.055	3173.140	1	48.	603	
CO	I	3122.317	3121.415	10	9.	603		CO	I	3174.47	3173.56	1	138.	603	
CO	I	3122.468	3121.566	10	11.	603		CO	I	3175.056	3174.140	2		603	
CO	I	3127.391	3126.488	1		603		CO	I	3175.820	3174.905	4	71.	603	
CO	I	3127.628	3126.725	4		603		CO	I	3178.182	3177.266	8		603	
CO	I	3128.158	3127.252	7	26.	603		CO	I	3180.745	3179.828	1		603	
CO	I	3129.910	3129.006	3		603		CO	I	3181.207	3180.290	2	106.	603	
CO	I	3130.385	3129.481	3	74.	603		CO	I	3183.036	3182.118	7	73.	603	
CO	I	3132.734	3131.829	1	48.	603		CO	I	3186.866	3185.948	2		603	
CO	I	3133.123	3132.218	4	7.	603		CO	I	3187.268	3186.350	5	8.	603	
CO	I	3135.53	3134.62	2		603		CO	I	3188.25	3187.34	4		603	
CO	I	3137.632	3136.726	5	8.	603		CO	I	3188.52	3187.60	3		603	
CO	I	3137.905	3136.999	1	48.	603		CO	I	3189.296	3188.377	7	74.	603	
CO	I	3138.235	3137.328	10	10.	603		CO	I	3190.671	3189.752	5	9.	603	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2114.18	2113.51	15		825		CO	II	2174.71	2174.03	10		825	
CO	II	2114.92	2114.25	2		825		CO	II	2175.230	2174.548	25		825	
CO	II	2115.067	2114.398	2		825		CO	II	2175.598	2174.916	2	11.	825	
CO	II	2117.76	2117.09	1		825		CO	II	2175.99	2175.31	10		825	
CO	II	2118.615	2117.945	5	2.	825		CO	II	2176.13	2175.45	1		825	
CO	II	2124.50	2123.83	3		825		CO	II	2177.77	2177.09	5		825	
CO	II	2125.69	2125.02	2		825		CO	II	2178.05	2177.37	5		825	
CO	II	2126.521	2125.849	2		825		CO	II	2179.26	2178.58	5		825	
CO	II	2129.25	2128.58	1		825		CO	II	2180.80	2180.12	20		825	
CO	II	2129.47	2128.80	1		825		CO	II	2181.15	2180.47	3		825	
CO	II	2129.847	2129.175	M		825		CO	II	2181.287	2180.604	6	23.	825	
CO	II	2130.28	2129.61	20		825		CO	II	2181.802	2181.119	2	23.	825	
CO	II	2130.47	2129.80	20		825		CO	II	2182.399	2181.716	8	11.	825	
CO	II	2131.93	2131.26	3		825		CO	II	2182.68	2182.00	10	23.	825	
CO	II	2132.95	2132.28	2		825		CO	II	2183.96	2183.28	2		825	
CO	II	2133.93	2133.26	30		825		CO	II	2187.716	2187.032	7	11.	825	
CO	II	2134.139	2133.466	4	2.	825		CO	II	2188.47	2187.78	7		825	
CO	II	2135.19	2134.52	20		825		CO	II	2188.71	2188.02	2		825	
CO	II	2137.145	2136.471	2	2.	825		CO	II	2189.22	2188.54	3		825	
CO	II	2145.02	2144.35	1		825		CO	II	2189.674	2188.990	10	11.	825	H
CO	II	2146.92	2146.24	40		825		CO	II	2190.05	2189.37	2		825	
CO	II	2147.654	2146.978	10		825		CO	II	2191.357	2190.672	18	22.	825	
CO	II	2148.051	2147.375	2	11.	825		CO	II	2191.65	2190.96	2		825	
CO	II	2149.21	2148.53	1		825		CO	II	2191.83	2191.15	2		825	
CO	II	2151.72	2151.04	1		825		CO	II	2193.175	2192.490	25	22.	825	
CO	II	2152.17	2151.49	0		825		CO	II	2194.280	2193.595	30	22.	825	
CO	II	2157.330	2156.652	3	11.	825		CO	II	2194.76	2194.09	2		825	
CO	II	2157.357	2156.679	3	11.	825		CO	II	2194.94	2194.25	1		825	
CO	II	2157.42	2156.74	7		825		CO	II	2195.62	2194.93	3		825	
CO	II	2157.614	2156.941	10	11.	825		CO	II	2195.91	2195.22	1		825	
CO	II	2157.632	2156.955		11.	488		CO	II	2196.20	2195.52	1		825	
CO	II	2158.855	2158.177	2		825		CO	II	2196.52	2195.83	8	23.	825	
CO	II	2159.42	2158.74	15		825		CO	II	2197.15	2196.46	10		825	
CO	II	2162.71	2162.03	2		825		CO	II	2197.92	2197.23	20		825	
CO	II	2164.48	2163.80	1		825		CO	II	2198.976	2198.289	10	10.	825	
CO	II	2166.22	2165.54	10		825		CO	II	2199.87	2199.18	1		825	
CO	II	2166.68	2166.00	3		825		CO	II	2200.93	2200.24	5		825	
CO	II	2171.04	2170.36	1		825		CO	II	2201.101	2200.414	15	11.	825	
CO	II	2173.556	2172.875	3	10.	825		CO	II	2203.666	2202.979	3	1.	825	
CO	II	2174.011	2173.330	18	10.	825		CO	II	2204.087	2203.400	3		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CO	II	2205.753	2205.065	15	22.	825		CO	II	2238.13	2237.44	2		825	
CO	II	2206.213	2205.525	15	22.	825		CO	II	2240.49	2239.80	4		825	
CO	II	2206.556	2205.868	8	10.	825		CO	II	2240.83	2240.13	2		825	
CO	II	2206.864	2206.176	4	22.	825		CO	II	2241.97	2241.27	4		825	
CO	II	2208.61	2207.92	30	23.	825		CO	II	2242.30	2241.60	5		825	
CO	II	2209.57	2208.88	3		825		CO	II	2243.60	2242.90	4		825	
CO	II	2209.74	2209.05	2		825		CO	II	2244.59	2243.90	4		825	
CO	II	2210.20	2209.51	10		825		CO	II	2245.09	2244.39	2		825	
CO	II	2211.76	2211.07	5		825		CO	II	2245.15	2244.45	2		825	
CO	II	2212.109	2211.421	18	10.	825		CO	II	2245.823	2245.118	35	10	825	
CO	II	2213.87	2213.18	10		825		CO	II	2246.50	2245.81	2		825	
CO	II	2215.472	2214.782	12	11.	825		CO	II	2246.85	2246.15	3		825	
CO	II	2217.17	2216.48	25		825		CO	II	2248.88	2248.18	3		825	
CO	II	2217.965	2217.274	10	9.	825		CO	II	2249.355	2248.658	5	9.	825	
CO	II	2218.10	2217.41	2		825		CO	II	2250.69	2249.99	20		825	
CO	II	2218.49	2217.80	3		825		CO	II	2251.09	2250.39	3		825	
CO	II	2218.82	2218.13	3		825		CO	II	2251.45	2250.75	10		825	
CO	II	2219.76	2219.07	10		825		CO	II	2251.82	2251.12	8		825	
CO	II	2220.62	2219.93	3		825		CO	II	2252.04	2251.34	4		825	
CO	II	2220.786	2220.095	10	22.	825		CO	II	2253.08	2252.38	3		825	
CO	II	2221.97	2221.28	3		825		CO	II	2253.52	2252.82	2	1.	825	
CO	II	2222.23	2221.54	3		825		CO	II	2253.70	2253.00	M		825	
CO	II	2222.50	2221.81	6		825		CO	II	2254.20	2253.50	12		825	
CO	II	2222.94	2222.25	4		825		CO	II	2254.83	2254.13	1		825	
CO	II	2223.65	2222.96	9		825		CO	II	2255.53	2254.83	10		825	
CO	II	2224.78	2224.09	10		825		CO	II	2255.67	2254.97	10		825	
CO	II	2225.04	2224.35	2		825		CO	II	2256.35	2255.65	4		825	
CO	II	2225.18	2224.49	1		825		CO	II	2256.72	2256.02	20		825	
CO	II	2225.56	2224.87	5		825		CO	II	2257.44	2256.74	35		825	
CO	II	2226.28	2225.59	5		825		CO	II	2258.56	2257.86	3		825	
CO	II	2228.28	2227.59	6		825		CO	II	2259.29	2258.59	2		825	
CO	II	2228.53	2227.84	1		825		CO	II	2260.71	2260.01	25		825	
CO	II	2231.21	2230.52	10		825		CO	II	2261.96	2261.26	1		825	
CO	II	2232.758	2232.064	18	10.	825	H	CO	II	2262.249	2261.549	5		825	
CO	II	2233.156	2232.462	15		825		CO	II	2262.77	2262.07	0		825	
CO	II	2234.62	2233.93	2		825		CO	II	2263.81	2263.11	3		825	
CO	II	2235.50	2234.80	50		825		CO	II	2264.30	2263.60	5		825	
CO	II	2235.81	2235.11	5		825		CO	II	2264.81	2264.11	2		825	
CO	II	2236.87	2236.17	2		825		CO	II	2265.94	2265.24	5		825	
CO	II	2237.75	2237.05	5		825		CO	II	2266.438	2265.737	5	9.	825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CO	II	2267.225	2266.524	10		825		CO	II	2293.40	2292.69	2		825	
CO	II	2267.498	2266.797	8		825		CO	II	2294.090	2293.383	25	9.	825	
CO	II	2268.63	2267.93	2		825		CO	II	2296.15	2295.44	2		825	
CO	II	2268.67	2267.97	10		825		CO	II	2296.61	2295.90	3		825	
CO	II	2270.60	2269.90	5		825		CO	II	2298.05	2297.34	8		825	
CO	II	2270.68	2269.98	M		825		CO	II	2299.433	2298.725	15	21.	825	
CO	II	2271.83	2271.13	9		825		CO	II	2300.13	2299.42	25		825	
CO	II	2271.91	2271.21	M		825		CO	II	2300.464	2299.756	40	21.	825	
CO	II	2271.98	2271.28	15		825		CO	II	2301.173	2300.465	3		825	
CO	II	2272.961	2272.259	12	9.	825		CO	II	2301.496	2300.788	25		825	
CO	II	2273.29	2272.59	4		825		CO	II	2302.10	2301.39	60	9.	825	
CO	II	2273.53	2272.83	7		825		CO	II	2303.43	2302.72	3		825	
CO	II	2273.61	2272.91	2		825		CO	II	2304.91	2304.20	4		825	
CO	II	2274.29	2273.59	10		825		CO	II	2305.39	2304.68	5		825	
CO	II	2274.37	2273.67	M		825		CO	II	2306.71	2306.00	15		825	
CO	II	2276.107	2275.404	8		825		CO	II	2306.81	2306.10	M		825	
CO	II	2276.42	2275.72	1		825		CO	II	2307.481	2306.771	4		825	
CO	II	2276.86	2276.16	1		825		CO	II	2307.709	2306.999	20		825	
CO	II	2277.24	2276.53	M		825		CO	II	2308.189	2307.479	15		825	
CO	II	2277.60	2276.90	3		825		CO	II	2308.561	2307.851	40	9.	825	H
CO	II	2277.99	2277.29	2		825		CO	II	2309.75	2309.04	M		825	
CO	II	2278.57	2277.87	1		825		CO	II	2310.95	2310.24	1		825	
CO	II	2279.176	2278.472	15		825		CO	II	2311.531	2310.820	4		825	
CO	II	2279.47	2278.77	5		825		CO	II	2312.310	2311.599	40	9.	825	H
CO	II	2279.719	2279.015	10		825		CO	II	2313.262	2312.551	30	21.	825	
CO	II	2280.01	2279.31	2		825		CO	II	2313.50	2312.79	5		825	
CO	II	2281.06	2280.36	15		825		CO	II	2314.318	2313.607	30	21.	825	
CO	II	2281.16	2280.46	M		825		CO	II	2314.752	2314.041	50	9.	825	H
CO	II	2281.660	2280.956	10	9.	825		CO	II	2315.355	2314.644	8		825	
CO	II	2282.595	2281.891	15		825		CO	II	2315.676	2314.965	40	9.	825	H
CO	II	2283.07	2282.37	1		825		CO	II	2316.455	2315.743	10		825	
CO	II	2284.225	2283.520	5	9.	825		CO	II	2316.65	2315.94	1		825	
CO	II	2286.51	2285.81	2		825		CO	II	2317.602	2316.896	M		825	
CO	II	2286.852	2286.147	25	9.	825	H	CO	II	2317.769	2317.057	30		825	
CO	II	2289.252	2288.546	5		825		CO	II	2319.129	2318.417	30		825	
CO	II	2289.770	2289.065	2		825		CO	II	2319.978	2319.265	6		825	
CO	II	2290.65	2289.94	1		825		CO	II	2320.07	2319.36	2		825	
CO	II	2291.029	2290.323	8		825		CO	II	2320.55	2319.84	3		825	
CO	II	2292.00	2291.29	5		825		CO	II	2321.00	2320.29	20		825	
CO	II	2292.688	2291.982	30	21.	825		CO	II	2321.93	2321.22	10		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2322.713	2322.000	2		825		CO	II	2353.2	2352.5	M		825	
CO	II	2325.028	2324.314	50	8.	825	H	CO	II	2354.146	2353.426	40	8.	825	H
CO	II	2326.834	2326.120	40	8.	825	H	CO	II	2356.21	2355.49	2		825	
CO	II	2327.185	2326.471	40	8.	825	H	CO	II	2357.40	2356.68	7		825	
CO	II	2328.383	2327.669	20		825		CO	II	2357.50	2356.78	M		825	
CO	II	2329.811	2329.096	15	21.	825		CO	II	2358.916	2358.195	40		825	
CO	II	2331.065	2330.350	40	8.	825	H	CO	II	2359.78	2359.06	8		825	
CO	II	2331.37	2330.65	10		825		CO	II	2360.19	2359.47	25		825	
CO	II	2332.38	2331.67	3		825		CO	II	2360.57	2359.85	10		825	
CO	II	2333.56	2332.85	15		825		CO	II	2361.231	2360.509	50		825	
CO	II	2334.77	2334.06	15		825		CO	II	2361.512	2360.790	20		825	
CO	II	2335.598	2334.882	9		825		CO	II	2361.852	2361.130	15		825	
CO	II	2336.942	2336.228	40	8.	825	H	CO	II	2362.235	2361.513	30	8.	825	
CO	II	2337.705	2336.989	25		825		CO	II	2364.518	2363.796	6	8.	825	H
CO	II	2338.05	2337.33	7		825		CO	II	2365.55	2364.83	3		825	
CO	II	2338.63	2337.91	50		825		CO	II	2367.915	2367.192	15		825	
CO	II	2339.433	2338.716	15		825		CO	II	2368.18	2367.45	10		825	
CO	II	2339.75	2339.03	15		825		CO	II	2369.33	2368.60	1		825	
CO	II	2341.835	2341.118	50		825		CO	II	2371.02	2370.30	1		825	
CO	II	2342.97	2342.25	6		825		CO	II	2371.450	2370.726	25		825	
CO	II	2343.11	2342.39	2		825		CO	II	2372.325	2371.601	7		825	
CO	II	2343.94	2343.22	1		825		CO	II	2372.570	2371.846	15		825	
CO	II	2344.05	2343.33	10		825		CO	II	2373.12	2372.39	5		825	
CO	II	2344.980	2344.262	20	8.	825		CO	II	2373.23	2372.51	2		825	
CO	II	2345.345	2344.627	25		825		CO	II	2373.810	2373.085	5		825	
CO	II	2346.212	2345.494	20		825		CO	II	2374.47	2373.75	2		825	
CO	II	2347.29	2346.57	30		825		CO	II	2375.181	2374.456	6		825	
CO	II	2347.833	2347.114	15		825		CO	II	2375.909	2375.184	40	8.	825	
CO	II	2348.114	2347.395	50	8.	825	H	CO	II	2379.349	2378.623	40	7.	825	H
CO	II	2348.53	2347.81	20		825		CO	II	2381.22	2380.50	M		825	
CO	II	2348.63	2347.91	12		825		CO	II	2381.71	2380.98	15		825	
CO	II	2348.73	2348.01	3		825		CO	II	2382.18	2381.46	M		825	
CO	II	2349.09	2348.37	9		825		CO	II	2382.479	2381.753	50		825	
CO	II	2349.18	2348.46	M		825		CO	II	2383.055	2382.328	40		825	
CO	II	2349.52	2348.80	1		825		CO	II	2384.182	2383.455	50	7.	825	
CO	II	2349.874	2349.155	5		825		CO	II	2384.82	2384.10	2		825	
CO	II	2351.879	2351.159	20		825		CO	II	2385.68	2384.95	M		825	
CO	II	2352.4	2351.7	M		825		CO	II	2387.091	2386.363	20	7.	825	H
CO	II	2352.559	2351.839	30		825		CO	II	2387.458	2386.730	30		825	
CO	II	2352.928	2352.208	20		825		CO	II	2388.187	2387.464	M		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2389.654	2388.926	40	7.	825		CO	II	2424.60	2423.86	15		825	
CO	II	2390.269	2389.541	40	7.	825	H	CO	II	2424.84	2424.16	1		825	
CO	II	2392.76	2392.03	4		825		CO	II	2426.87	2426.13	25		825	
CO	II	2393.32	2392.59	40		825		CO	II	2426.98	2426.24	5		825	
CO	II	2394.634	2393.905	40	8.	825		CO	II	2427.787	2427.056	M		825	
CO	II	2396.246	2395.516	20		825		CO	II	2429.025	2428.288	40	7.	825	
CO	II	2398.12	2397.39	30	16.	825	H	CO	II	2430.659	2429.922	20		825	
CO	II	2399.100	2398.370	30		825		CO	II	2431.23	2430.49	4		825	
CO	II	2400.21	2399.48	3		825		CO	II	2433.26	2432.52	80		825	
CO	II	2402.17	2401.44	3		825		CO	II	2433.558	2432.825	M		825	
CO	II	2403.324	2402.593	15		825		CO	II	2433.808	2433.079	M		825	
CO	II	2403.52	2402.79	6		825		CO	II	2436.71	2435.97	M		825	
CO	II	2404.363	2403.637	15		825		CO	II	2437.07	2436.33	M		825	
CO	II	2404.51	2403.78	20		825		CO	II	2437.175	2436.436	5		825	
CO	II	2404.61	2403.88	M		825		CO	II	2437.39	2436.65	M		825	
CO	II	2404.897	2404.165	60	7.	825		CO	II	2437.717	2436.978	30	7.	825	
CO	II	2405.25	2404.52	25		825		CO	II	2437.99	2437.25	M		825	
CO	II	2407.99	2407.26	10		825		CO	II	2439.15	2438.41	3		825	
CO	II	2408.390	2407.658	40	16	825		CO	II	2439.78	2439.04	50		825	
CO	II	2409.137	2408.404	30		825		CO	II	2440.03	2439.29	1		825	
CO	II	2409.352	2408.620	M		825		CO	II	2442.44	2441.70	15		825	
CO	II	2409.480	2408.747	40	7.	825	H	CO	II	2443.33	2442.59	30		825	
CO	II	2414.79	2414.06	30	7.	825	H	CO	II	2443.40	2442.66	20		825	
CO	II	2416.024	2415.299	M		825		CO	II	2444.515	2443.774	30	16.	825	
CO	II	2416.723	2415.989	40		825		CO	II	2444.77	2444.03	12		825	
CO	II	2416.946	2416.212	30		825		CO	II	2445.26	2444.52	2		825	
CO	II	2417.06	2416.33	15		825		CO	II	2445.65	2444.91	1		825	
CO	II	2417.18	2416.44	5		825		CO	II	2446.30	2445.56	1		825	
CO	II	2417.625	2416.891	40	16.	825		CO	II	2446.753	2446.012	30		825	
CO	II	2418.387	2417.652	50	7.	825		CO	II	2447.30	2446.56	15		825	
CO	II	2418.70	2417.96	10		825		CO	II	2448.24	2447.50	10		825	
CO	II	2419.208	2418.473	20		825		CO	II	2448.44	2447.70	M		825	
CO	II	2419.43	2418.70	7		825		CO	II	2448.566	2447.825	40		825	
CO	II	2421.27	2420.54	15		825		CO	II	2448.68	2447.94	15		825	
CO	II	2421.458	2420.723	40		825	H	CO	II	2448.79	2448.05	8		825	
CO	II	2421.68	2420.94	15		825		CO	II	2449.899	2449.157	40	7.	825	
CO	II	2421.75	2421.02	12		825		CO	II	2450.741	2449.999	40	16.	825	H
CO	II	2422.77	2422.03	5		825		CO	II	2451.21	2450.47	2		825	
CO	II	2424.38	2423.64	40	7.	825		CO	II	2452.73	2451.99	4		825	
CO	II	2424.536	2423.803	M		825		CO	II	2453.30	2452.56	25		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2454.58	2453.84	2		825		CO	II	2488.40	2487.65	2		825	
CO	II	2454.83	2454.09	1		825		CO	II	2488.629	2487.878	M		825	
CO	II	2454.92	2454.18	15		825		CO	II	2488.88	2488.13	10		825	
CO	II	2459.504	2458.761	2		825		CO	II	2489.181	2488.432	M		825	
CO	II	2459.99	2459.25	4		825		CO	II	2490.349	2489.598	M		825	
CO	II	2460.198	2459.454	30		825		CO	II	2491.140	2490.389	30		825	
CO	II	2460.42	2459.68	4		825		CO	II	2491.91	2491.16	15		825	
CO	II	2462.01	2461.26	10		825		CO	II	2493.93	2493.18	1		825	
CO	II	2464.33	2463.59	6		825		CO	II	2493.98	2493.23	1		825	
CO	II	2464.75	2464.01	20		825		CO	II	2494.33	2493.58	4		825	
CO	II	2464.945	2464.200	50	15.	825		CO	II	2497.19	2496.44	30		825	
CO	II	2467.16	2466.41	3		825		CO	II	2498.05	2497.30	4		825	
CO	II	2467.61	2466.86	7		825		CO	II	2498.237	2497.484	30		825	
CO	II	2467.793	2467.047	25		825		CO	II	2498.50	2497.75	10		825	
CO	II	2468.06	2467.31	10		825		CO	II	2499.38	2498.62	15		825	
CO	II	2470.01	2469.26	M		825		CO	II	2499.576	2498.823	40		825	
CO	II	2470.29	2469.54	7		825		CO	II	2499.84	2499.09	15		825	
CO	II	2471.39	2470.64	1		825		CO	II	2500.08	2499.33	1		825	
CO	II	2471.88	2471.13	2		825		CO	II	2501.36	2500.60	2		825	
CO	II	2476.07	2475.32	1		825		CO	II	2502.80	2502.04	4		825	
CO	II	2477.21	2476.46	15		825		CO	II	2503.29	2502.54	2		825	
CO	II	2478.046	2477.298	30		825		CO	II	2503.99	2503.24	20		825	
CO	II	2478.229	2477.481	25		825		CO	II	2504.611	2503.857	10		825	
CO	II	2478.34	2477.59	12		825		CO	II	2505.273	2504.518	50		825	
CO	II	2478.942	2478.193	15		825		CO	II	2505.88	2505.13	30		825	
CO	II	2479.041	2478.292	20		825		CO	II	2506.52	2505.77	15		825	
CO	II	2479.30	2478.55	4		825		CO	II	2506.88	2506.12	4		825	
CO	II	2479.797	2479.048	30		825		CO	II	2507.215	2506.460	60	15.	825	
CO	II	2480.06	2479.31	4		825		CO	II	2508.718	2507.963	60		825	
CO	II	2480.90	2480.15	1		825		CO	II	2508.79	2508.04	60		825	
CO	II	2483.39	2482.64	1		825		CO	II	2509.01	2508.25	15		825	
CO	II	2485.06	2484.31	10		825		CO	II	2510.85	2510.09	10		825	
CO	II	2485.12	2484.37	1		825		CO	II	2511.774	2511.018	20		825	
CO	II	2485.62	2484.87	7		825		CO	II	2511.915	2511.159	15		825	
CO	II	2486.110	2485.360	30	14.	825		CO	II	2512.20	2511.44	20		825	
CO	II	2487.183	2486.433	40	15.	825		CO	II	2512.42	2511.67	1		825	
CO	II	2487.44	2486.69	15		825		CO	II	2512.49	2511.74	1		825	
CO	II	2487.69	2486.94	1		825		CO	II	2512.61	2511.86	1		825	
CO	II	2487.89	2487.14	20		825		CO	II	2512.81	2512.05	20		825	
CO	II	2488.158	2487.407	25		825		CO	II	2513.17	2512.41	M		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	II	2513.45	2512.69		1	825		CO	II	2536.121	2535.359	M		825	
CO	II	2513.88	2513.12	M		825		CO	II	2536.709	2535.947	00		825	
CO	II	2514.87	2514.11		1	825		CO	II	2536.83	2536.07	20		825	
CO	II	2515.056	2514.299	M		825		CO	II	2537.28	2536.52	25		825	
CO	II	2518.11	2517.35		2	825		CO	II	2537.56	2536.80	2		825	
CO	II	2518.169	2517.414		25	825		CO	II	2538.219	2537.457	10		825	
CO	II	2518.53	2517.77	M		825		CO	II	2539.57	2538.81	1		825	
CO	II	2519.577	2518.820	M		825		CO	II	2539.72	2538.96	2		825	
CO	II	2520.23	2519.47		5	825		CO	II	2541.394	2540.631	40	27.	825	
CO	II	2520.576	2519.818		50	825	H	CO	II	2542.713	2541.950	50	14.	825	
CO	II	2520.718	2519.960		200	825		CO	II	2543.99	2543.22	M		825	
CO	II	2520.87	2520.11		20	825		CO	II	2544.12	2543.36	1		825	
CO	II	2522.116	2521.357		0	825		CO	II	2545.001	2544.237	00		825	
CO	II	2523.708	2522.949		2	825		CO	II	2545.11	2544.35	20		825	
CO	II	2525.089	2524.330	M		825		CO	II	2545.279	2544.515	00		825	
CO	II	2525.20	2524.44		4	825		CO	II	2545.33	2544.56	8		825	
CO	II	2525.383	2524.624		1	825	27.	CO	II	2545.39	2544.63	M		825	
CO	II	2525.730	2524.971		50	825	15.	CO	II	2545.809	2545.045	20	17.	825	
CO	II	2526.03	2525.27		20	825		CO	II	2546.03	2545.27	4		825	
CO	II	2526.14	2525.38		1	825		CO	II	2546.45	2545.69	10		825	
CO	II	2526.81	2526.05		10	825		CO	II	2546.67	2545.91	5		825	
CO	II	2527.04	2526.28		1	825		CO	II	2546.926	2546.162	25		825	
CO	II	2528.58	2527.82	M		825		CO	II	2546.99	2546.22	3		825	
CO	II	2528.979	2528.219		10	825	27.	CO	II	2547.377	2546.613	10		825	
CO	II	2529.375	2528.615		40	825	14.	CO	II	2547.504	2546.740	40		825	
CO	II	2529.66	2528.90			825		CO	II	2547.76	2547.00	10		825	
CO	II	2529.88	2529.12	M	12	825		CO	II	2548.74	2547.98	5		825	
CO	II	2530.28	2529.52		2	825		CO	II	2548.958	2548.194	M		825	
CO	II	2530.802	2530.042	M		825		CO	II	2549.102	2548.337	40		825	
CO	II	2530.885	2530.124		30	825	27.	CO	II	2550.06	2549.29	M		825	
CO	II	2531.33	2530.57		25	825		CO	II	2550.64	2549.88	10		825	
CO	II	2531.79	2531.03	M		825		CO	II	2550.79	2550.02	50		825	
CO	II	2532.11	2531.35	M		825		CO	II	2551.29	2550.53	2		825	
CO	II	2532.937	2532.176		30	825		CO	II	2553.149	2552.383	15		825	
CO	II	2534.53	2533.77	M		825		CO	II	2554.13	2553.36	40		825	
CO	II	2534.59	2533.83		40	825	27.	CO	II	2554.68	2553.91	3		825	
CO	II	2535.15	2534.39		1	825		CO	II	2555.85	2555.08	30		825	
CO	II	2535.4	2534.6	M		825		CO	II	2556.10	2555.33	4		825	
CO	II	2535.71	2534.95	M		825		CO	II	2557.529	2556.762	30		825	
CO	II	2536.058	2535.296	M		825		CO	II	2557.56	2556.79	1		825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2558.115	2557.348	30	17.	825		CO	II	2586.636	2585.862	00		825	
CO	II	2558.727	2557.960	00		825		CO	II	2587.24	2586.47	1		825	
CO	II	2559.90	2559.13	4		825		CO	II	2587.472	2586.698	M		825	
CO	II	2560.176	2559.408	40	15.	825		CO	II	2587.59	2586.80	3		825	
CO	II	2560.42	2559.65	10		825		CO	II	2587.650	2586.876	00		825	
CO	II	2560.800	2560.031	40		825		CO	II	2587.72	2586.95	3		825	
CO	II	2560.86	2560.09	M		825		CO	II	2587.850	2587.072	M		825	
CO	II	2561.05	2560.28	8		825		CO	II	2587.991	2587.217	100	14.	825	H
CO	II	2561.43	2560.66	15		825		CO	II	2588.288	2587.514	3		825	
CO	II	2561.79	2561.02	M		825		CO	II	2589.692	2588.917	0		825	
CO	II	2562.048	2561.280	M		825		CO	II	2589.81	2589.03	1		825	
CO	II	2562.88	2562.11	2		825		CO	II	2592.37	2591.60	1		825	
CO	II	2563.26	2562.51	3		825		CO	II	2593.66	2592.88	2		825	
CO	II	2564.26	2563.49	1		825		CO	II	2594.18	2593.41	3		825	
CO	II	2564.50	2563.73	10		825		CO	II	2594.489	2593.707	0		825	
CO	II	2564.807	2564.038	10	15.	825		CO	II	2594.52	2593.74	2		825	
CO	II	2565.06	2564.29	15		825		CO	II	2595.990	2595.214	M		825	
CO	II	2565.340	2564.571	15		825		CO	II	2598.16	2597.38	M		825	
CO	II	2566.140	2565.371	25	17.	825		CO	II	2599.138	2598.359	00		825	
CO	II	2566.38	2565.61	4		825		CO	II	2599.984	2599.207	M		825	
CO	II	2568.12	2567.34	2		825		CO	II	2600.197	2599.420	2		825	
CO	II	2570.523	2569.753	10		825		CO	II	2603.743	2602.965	M		825	
CO	II	2574.72	2573.95	M		825		CO	II	2605.184	2604.406	20		825	
CO	II	2575.51	2574.74	2		825		CO	II	2605.48	2604.70	1		825	
CO	II	2575.633	2574.862	40	17.	825		CO	II	2606.26	2605.48	1		825	
CO	II	2575.89	2575.12	3		825		CO	II	2606.47	2605.69	10	26.	825	
CO	II	2576.237	2575.466	1		825		CO	II	2606.69	2605.91	4		825	
CO	II	2576.85	2576.08	00		825		CO	II	2607.77	2606.99	2		825	
CO	II	2578.50	2577.73	M		825		CO	II	2607.860	2607.082	00		825	
CO	II	2578.69	2577.92	1		825		CO	II	2608.39	2607.61	2		825	
CO	II	2581.095	2580.323	100	14.	825	H	CO	II	2610.247	2609.468	00		825	
CO	II	2581.73	2580.96	4		825		CO	II	2611.07	2610.29	1		825	
CO	II	2581.99	2581.22	5		825		CO	II	2611.589	2610.809	00		825	
CO	II	2582.74	2581.97	3		825		CO	II	2612.62	2611.84	4		825	
CO	II	2583.001	2582.228	500	14.	825		CO	II	2612.653	2611.873	00		825	
CO	II	2583.012	2582.239	500	14.	825		CO	II	2613.253	2612.473	20		825	
CO	II	2583.29	2582.52	3		825		CO	II	2614.275	2613.495	20	17.	825	
CO	II	2583.942	2583.169	20		825		CO	II	2614.43	2613.65	M		825	
CO	II	2584.22	2583.45	2		825		CO	II	2615.147	2614.366	20	20.	825	
CO	II	2585.96	2585.18	2		825		CO	II	2615.45	2614.67	4		825	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2617.73	2616.94	00	825		CO	II	2657.06	2656.27	2	825	
CO	II	2618.33	2617.55	M	825		CO	II	2657.16	2656.37	00	825	
CO	II	2619.682	2618.901	10	825	26.	CO	II	2657.29	2656.50	1	825	
CO	II	2620.586	2619.804	20	825		CO	II	2657.43	2656.64	2	825	
CO	II	2620.88	2620.10	2	825		CO	II	2659.516	2658.725	M	825	
CO	II	2621.66	2620.88	1	825		CO	II	2659.96	2659.17	0	825	
CO	II	2622.39	2621.61	1	825		CO	II	2661.63	2660.84	M	825	
CO	II	2623.52	2622.74	1	825		CO	II	2662.51	2661.72	5	825	
CO	II	2624.22	2623.44	M	825		CO	II	2662.82	2662.03	M	825	
CO	II	2627.51	2626.72	10	825		CO	II	2663.25	2662.46	1	825	
CO	II	2629.10	2628.31	00	825		CO	II	2663.44	2662.64	1	825	
CO	II	2629.57	2628.78	20	825	26.	CO	II	2664.320	2663.528	50	13.	825
CO	II	2629.66	2628.87	00	825		CO	II	2664.95	2664.16	1	825	
CO	II	2631.30	2630.52	1	825		CO	II	2665.41	2664.62	1	825	
CO	II	2631.823	2631.039	00	825		CO	II	2665.92	2665.13	5	825	
CO	II	2632.096	2631.312	M	825		CO	II	2666.92	2666.13	3	825	
CO	II	2632.76	2631.98	2	825		CO	II	2667.55	2666.76	3	28.	825
CO	II	2633.040	2632.255	30	825	20.	CO	II	2670.51	2669.71	2	825	
CO	II	2633.35	2632.57	4	825		CO	II	2670.60	2669.81	100	28.	825
CO	II	2635.23	2634.44	1	825		CO	II	2671.65	2670.85	4	825	
CO	II	2635.710	2634.925	15	825		CO	II	2672.85	2672.05	00	825	
CO	II	2636.02	2635.23	1	825		CO	II	2674.73	2673.93	M	825	
CO	II	2636.34	2635.55	1	825		CO	II	2676.70	2675.90	10	28.	825
CO	II	2636.64	2635.85	1	825		CO	II	2678.85	2678.05	5	825	
CO	II	2636.80	2636.02	20	825		CO	II	2681.24	2680.44	7	825	
CO	II	2636.862	2636.076	1	825		CO	II	2681.32	2680.52	3	825	
CO	II	2637.16	2636.37	10	825		CO	II	2682.70	2681.90	2	825	
CO	II	2637.99	2637.21	1	825		CO	II	2682.96	2682.16	3	825	
CO	II	2638.13	2637.35	10	825		CO	II	2685.237	2684.440	20	28.	825
CO	II	2639.87	2639.08	1	825		CO	II	2690.606	2689.808	8	825	
CO	II	2641.30	2640.48	M	825		CO	II	2693.04	2692.24	1	825	
CO	II	2649.43	2648.64	40	825		CO	II	2693.26	2692.46	2	825	
CO	II	2649.451	2648.662	25	825		CO	II	2693.81	2693.01	3	825	
CO	II	2652.96	2652.17	3	825		CO	II	2693.890	2693.091	6	825	
CO	II	2653.56	2652.77	5	825		CO	II	2695.479	2694.679	200	13.	825
CO	II	2653.62	2652.83	8	825		CO	II	2695.82	2695.02	4	825	
CO	II	2653.89	2653.10	1	825	13.	CO	II	2695.93	2695.13	0	825	
CO	II	2654.20	2653.41	1	825		CO	II	2696.060	2695.260	0	825	
CO	II	2654.503	2653.713	30	825	20.	CO	II	2696.17	2695.37	0	825	
CO	II	2654.80	2654.01	3	825		CO	II	2696.68	2695.88	1	825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2697.850	2697.050	15	13.	825		CO	II	2719.16	2718.36	1		825	
CO	II	2698.21	2697.41	1		825		CO	II	2719.84	2719.03	15		825	
CO	II	2698.70	2697.90	4		825		CO	II	2721.49	2720.68	1		825	
CO	II	2699.08	2698.28	1		825		CO	II	2721.72	2720.91	15		825	
CO	II	2699.216	2698.415	0		825		CO	II	2721.83	2721.02	6		825	
CO	II	2699.46	2698.66	1		825		CO	II	2723.90	2723.09	6		825	
CO	II	2701.18	2700.38	8		825		CO	II	2724.37	2723.56	4		825	
CO	II	2701.53	2700.73	1		825		CO	II	2724.83	2724.02	5		825	
CO	II	2702.44	2701.64	1		825		CO	II	2726.37	2725.56	3		825	
CO	II	2702.806	2702.004	5	29.	825		CO	II	2726.56	2725.76	6		825	
CO	II	2703.235	2702.433	10	29.	825		CO	II	2727.98	2727.18	2		825	
CO	II	2703.588	2702.786	0		825		CO	II	2728.595	2727.787	15	30.	825	
CO	II	2706.493	2705.691	M		825		CO	II	2729.90	2729.09	2		825	
CO	II	2706.65	2705.85	100		825		CO	II	2730.64	2729.83	3		825	
CO	II	2707.197	2706.396	4		825		CO	II	2731.59	2730.78	3		825	
CO	II	2707.362	2706.560	100	28.	825		CO	II	2732.31	2731.50	10		825	
CO	II	2708.085	2707.282	10	29.	825		CO	II	2733.649	2732.840	15		825	
CO	II	2708.747	2707.944	1		825		CO	II	2733.79	2732.98	2		825	
CO	II	2708.85	2708.04	15		825		CO	II	2734.28	2733.57	1		825	
CO	II	2709.722	2708.920	30	29.	825		CO	II	2734.54	2733.73	1		825	
CO	II	2710.792	2709.990	1		825		CO	II	2735.375	2734.566	3		825	
CO	II	2711.137	2710.334	1		825		CO	II	2736.26	2735.45	5		825	
CO	II	2711.358	2710.555	1		825		CO	II	2737.75	2736.94			825	
CO	II	2711.615	2710.811	1		825		CO	II	2738.11	2737.30	3		825	
CO	II	2712.70	2711.90	M		825		CO	II	2739.13	2738.30	8		825	
CO	II	2713.15	2712.35	15		825		CO	II	2739.761	2738.951	10		825	
CO	II	2714.01	2713.21	1		825		CO	II	2740.25	2739.44	8		825	
CO	II	2714.94	2714.14	4		825		CO	II	2740.34	2739.53	10		825	
CO	II	2715.179	2714.374	15		825		CO	II	2742.86	2742.05	2		825	
CO	II	2715.243	2714.439	200	13.	825		CO	II	2743.21	2742.40	3		825	
CO	II	2715.250	2714.446	200		825		CO	II	2743.51	2742.70	3		825	
CO	II	2715.61	2714.81	3		825		CO	II	2744.00	2743.19	2		825	
CO	II	2715.75	2714.95	2		825		CO	II	2744.85	2744.04	2		825	
CO	II	2716.48	2715.67	5		825		CO	II	2745.57	2744.76	2		825	
CO	II	2716.84	2716.04	1		825		CO	II	2746.30	2745.49	10		825	
CO	II	2717.18	2716.37	10		825		CO	II	2747.294	2746.481	4		825	
CO	II	2717.32	2716.51	2		825		CO	II	2747.767	2746.955	4		825	
CO	II	2717.53	2716.73	1		825		CO	II	2749.20	2748.39	6		825	
CO	II	2718.83	2717.83	1		825		CO	II	2750.125	2749.312	4		825	
CO	II	2718.94	2718.13	1		825		CO	II	2750.43	2749.61	2		825	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2750.69	2749.88	15		825	CO	II	2796.35	2795.53	5		825
CO	II	2752.49	2751.67	5		825	CO	II	2796.41	2795.59	7		825
CO	II	2754.074	2753.260	8	29.	825	CO	II	2797.644	2796.820	6		825
CO	II	2754.15	2753.34	8		825	CO	II	2798.751	2797.925	300		825
CO	II	2755.56	2754.75	3		825	CO	II	2799.15	2798.33	20		825
CO	II	2756.33	2755.52	8		825	CO	II	2799.76	2798.93	7		825
CO	II	2756.54	2755.73	2		825	CO	II	2800.52	2799.69	5		825
CO	II	2757.15	2756.33	1		825	CO	II	2801.24	2800.41	3		825
CO	II	2757.43	2756.62	1		825	CO	II	2801.91	2801.08	20		825
CO	II	2758.10	2757.28	1		825	CO	II	2802.792	2801.966	1		825
CO	II	2760.93	2760.11	8		825	CO	II	2802.88	2802.05	5		825
CO	II	2765.53	2764.72	M		825	CO	II	2803.086	2802.260	1		825
CO	II	2767.51J	2766.696	4	29.	825	CO	II	2803.531	2802.705	8		825
CO	II	2767.64	2766.82	4	29.	825	CO	II	2804.18	2803.36	5		825
CO	II	2768.315	2767.498	0		825	CO	II	2807.77	2806.94	1		825
CO	II	2768.474	2767.657	50		825	CO	II	2808.000	2807.173	10		825
CO	II	2769.891	2769.073	12		825	CO	II	2808.43	2807.60	5		825
CO	II	2775.787	2774.968	4	30.	825	CO	II	2810.50	2809.67	4		825
CO	II	2776.79	2775.97	1		825	CO	II	2811.10	2810.28	10		825
CO	II	2777.029	2776.209	15		825	CO	II	2811.682	2810.854	15		825
CO	II	2777.16	2776.34	5		825	CO	II	2813.67	2812.84	2		825
CO	II	2780.148	2779.328	0		825	CO	II	2814.10	2813.27	1		825
CO	II	2780.475	2779.655	8	30.	825	CO	II	2814.60	2813.77	1		825
CO	II	2780.632	2779.812	2		825	CO	II	2816.532	2815.703	0		825
CO	II	2781.19	2780.37	5		825	CO	II	2816.741	2815.912	2		825
CO	II	2782.21	2781.39	3		825	CO	II	2816.82	2815.99	5		825
CO	II	2782.70	2781.88	7		825	CO	II	2816.98	2816.15	2		825
CO	II	2782.91	2782.09	3		825	CO	II	2817.805	2816.976	0		825
CO	II	2784.50	2783.68	0		825	CO	II	2819.72	2818.89	7		825
CO	II	2786.25	2785.43	7		825	CO	II	2822.27	2821.44	5		825
CO	II	2786.51	2785.69	M		825	CO	II	2822.58	2821.75	10		825
CO	II	2788.60	2787.78	3		825	CO	II	2823.56	2822.73	1		825
CO	II	2788.93	2788.10	4		825	CO	II	2823.764	2822.932	3		825
CO	II	2790.36	2789.54	7		825	CO	II	2823.82	2822.99	3		825
CO	II	2791.592	2790.769	150		825	CO	II	2824.11	2823.28	1		825
CO	II	2792.263	2791.440	5		825	CO	II	2825.27	2824.44	7		825
CO	II	2793.260	2792.437	30		825	CO	II	2825.48	2824.65	4		825
CO	II	2794.529	2793.705	5	30.	825	CO	II	2826.082	2825.250	200		825
CO	II	2794.94	2794.12	4		825	CO	II	2826.52	2825.69	4		825
CO	II	2796.06	2795.24	1		825	CO	II	2829.91	2829.08	4		825

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	II	2830.02	2829.19	6	825		CO	II	2881.64	2880.79	1	825	
CO	II	2832.16	2831.32	4	825		CO	II	2884.24	2883.39	4	825	
CO	II	2832.66	2831.83	7	825		CO	II	2884.449	2883.603	M	825	
CO	II	2835.773	2834.939	15	825		CO	II	2888.65	2887.81	1	825	
CO	II	2836.23	2835.39	1	825		CO	II	2890.41	2889.56	M	825	
CO	II	2836.44	2835.61	2	825		CO	II	2890.80	2889.95	8	825	
CO	II	2837.48	2836.64	10	825		CO	II	2891.283	2890.436	20	825	
CO	II	2838.415	2837.580	3	825		CO	II	2891.78	2890.93	1	825	
CO	II	2844.08	2843.25	2	825		CO	II	2893.18	2892.34	M	825	
CO	II	2844.43	2843.60	7	825		CO	II	2896.19	2895.34	M	825	
CO	II	2844.87	2844.03	10	825		CO	II	2898.78	2897.93	7	825	
CO	II	2845.93	2845.09	2	825		CO	II	2899.62	2898.77	3	825	
CO	II	2846.04	2845.20	15	825		CO	II	2903.60	2902.75	5	825	
CO	II	2846.480	2845.644	15	825		CO	II	2905.96	2905.11	4	825	
CO	II	2847.53	2846.70	6	825		CO	II	2907.14	2906.29	1	825	
CO	II	2848.24	2847.40	5	825		CO	II	2907.81	2906.96	4	825	
CO	II	2848.470	2847.633	0	825		CO	II	2907.95	2907.10	6	825	
CO	II	2848.957	2848.120	7	825		CO	II	2909.70	2908.85	2	825	
CO	II	2850.40	2849.56	5	825		CO	II	2911.06	2910.21	5	825	
CO	II	2852.59	2851.75	5	825		CO	II	2916.21	2915.44	2	825	
CO	II	2852.916	2852.078	100	825		CO	II	2917.45	2916.60	0	825	
CO	II	2852.97	2852.13	10	825		CO	II	2918.02	2917.17	7	825	
CO	II	2853.65	2852.81	4	825		CO	II	2919.224	2918.370	4	825	
CO	II	2854.37	2853.53	6	825		CO	II	2919.26	2918.41	12	825	
CO	II	2856.91	2856.07	7	825		CO	II	2923.28	2922.40	0	825	
CO	II	2858.84	2858.00	5	825		CO	II	2923.57	2922.71	0	825	
CO	II	2864.389	2863.542	6	825		CO	II	2925.60	2924.75	6	825	
CO	II	2865.29	2864.45	2	825		CO	II	2929.450	2928.593	10	825	
CO	II	2866.22	2865.38	5	825		CO	II	2930.193	2929.336	M	825	
CO	II	2866.34	2865.50	1	825		CO	II	2931.062	2930.205	150	825	
CO	II	2867.390	2866.548	2	825		CO	II	2931.54	2930.68	3	825	
CO	II	2867.52	2866.68	1	825		CO	II	2932.56	2931.70	2	825	
CO	II	2869.01	2868.17	0	825		CO	II	2933.902	2933.041	5	825	
CO	II	2870.770	2869.928	5	825		CO	II	2936.925	2936.066	50	825	
CO	II	2872.053	2871.213	25	825		CO	II	2938.84	2937.98	7	825	
CO	II	2874.72	2873.88	0	825		CO	II	2940.20	2939.34	7	825	
CO	II	2876.28	2875.44	6	825		CO	II	2943.484	2942.624	8	825	
CO	II	2876.71	2875.87	5	825		CO	II	2943.819	2942.959	100	825	
CO	II	2877.24	2876.40	4	825		CO	II	2944.768	2943.900	M	825	
CO	II	2880.936	2880.091	2	825		CO	II	2946.51	2945.65	4	825	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	II	2947.02	2946.16	12		825		CO	II	3212.94	3212.02	1		825	
CO	II	2948.36	2947.49	1		825		CO	II	3214.29	3213.36	1		825	
CO	II	2948.71	2947.85	8		825		CO	II	3219.89	3218.96	3		825	
CO	II	2949.92	2949.06	M		825		CO	II	3324.93	3323.97	M		825	
CO	II	2950.04	2949.18	2		825		CO	II	3342.42	3341.46	M		825	
CO	II	2951.86	2951.00	1		825		CO	II	3344.93	3343.97	M		825	
CO	II	2954.24	2953.38	30		825		CO	II	3353.76	3352.79	30	2.	825	
CO	II	2955.46	2954.59	M		825		CO	II	3359.55	3358.58	10	2.	825	
CO	II	2955.591	2954.728	12		825		CO	II	3370.41	3369.44	M		825	
CO	II	2960.44	2959.57	2		825		CO	II	3371.91	3370.94	50	2.	825	
CO	II	2970.484	2969.617	M		825		CO	II	3380.86	3379.89	1		825	
CO	II	2971.37	2970.50	1		825		CO	II	3388.68	3387.71	60	2.	825	
CO	II	2973.04	2972.17	M		825		CO	II	3389.18	3388.23	50	2.	825	
CO	II	2982.86	2981.99	2		825		CO	II	3389.43	3388.46	25		825	
CO	II	2985.64	2984.77	10		825		CO	II	3400.16	3399.18	2		825	
CO	II	2986.39	2985.51	1		825		CO	II	3416.76	3415.78	75	2.	825	
CO	II	2986.83	2985.96	2		825		CO	II	3424.80	3423.82	75	2.	825	
CO	II	2987.94	2987.07	2		825		CO	II	3431.83	3430.84	4		825	
CO	II	2993.463	2992.590	M		825		CO	II	3438.29	3437.31	10		825	
CO	II	3003.35	3002.48	2		825		CO	II	3447.38	3446.40	100	2.	825	
CO	II	3003.49	3002.61	2		825		CO	II	3452.30	3451.31	100		825	
CO	II	3005.73	3004.85	4		825		CO	II	3490.28	3489.28	25		825	
CO	II	3008.18	3007.30	3		825		CO	II	3498.28	3497.28	1		825	
CO	II	3008.24	3007.37	5		825		CO	II	3500.90	3499.90	1		825	
CO	II	3009.65	3008.67	M		825		CO	II	3502.66	3501.66	200	2.	825	
CO	II	3009.72	3008.84	4		825		CO	III	2000.45	1999.80	20		673	
CO	II	3023.49	3022.61	3		825		CO	III	2000.70	2000.06	0		673	
CO	II	3029.066	3028.184	M		825		CO	III	2001.74	2001.09	100		673	
CO	II	3035.58	3034.70	M		825		CO	III	2002.56	2001.91	0	50.	673	
CO	II	3037.10	3036.22	M		825		CO	III	2003.44	2002.79	0		673	
CO	II	3052.20	3051.32	M		825		CO	III	2004.56	2003.91	5		673	
CO	II	3053.03	3052.15	1		825		CO	III	2004.94	2004.29	3		673	
CO	II	3097.73	3096.83	M		825		CO	III	2006.19	2005.55	20	50.	673	
CO	II	3100.39	3099.49	M		825		CO	III	2011.25	2010.60	50		673	
CO	II	3105.69	3104.79	4		825		CO	III	2012.27	2011.62	200	50.	673	
CO	II	3131.64	3130.74	8		825		CO	III	2013.38	2012.73	20	50.	673	
CO	II	3131.70	3130.79	M		825		CO	III	2014.53	2013.88	200		673	
CO	II	3172.62	3171.70	2		825		CO	III	2016.47	2015.82	20		673	
CO	II	3178.21	3177.29	15		825		CO	III	2016.69	2016.04	10		673	
CO	II	3194.77	3193.84	1		825		CO	III	2020.06	2019.41	30		673	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CO	111	2020.78	2020.12	50	673		CO	111	2075.78	2075.12	0	673	
CO	111	2025.12	2024.47	30	673		CO	111	2078.01	2077.35	1	673	
CO	111	2029.23	2028.58	50	673		CO	111	2080.40	2079.74	10	673	
CO	111	2031.33	2030.68	2	673		CO	111	2081.67	2081.01	2	673	
CO	111	2032.46	2031.81	100	673		CO	111	2081.90	2081.24	2	673	
CO	111	2033.73	2033.07	3	673		CO	111	2082.91	2082.25	0	673	
CO	111	2034.26	2033.61	5	673		CO	111	2084.89	2084.23	1	673	
CO	111	2034.94	2034.29	10	673		CO	111	2085.61	2084.95	2	673	
CO	111	2039.82	2039.17	50	673		CO	111	2088.06	2087.40	1	673	
CO	111	2040.50	2039.84	5	673		CO	111	2089.24	2089.58	15	673	
CO	111	2040.88	2040.23	10	673		CO	111	2090.09	2089.43	0	673	
CO	111	2043.70	2043.05	2	673		CO	111	2091.17	2090.51	10	64.	673
CO	111	2044.88	2044.23	5	673		CO	111	2092.88	2092.22	0	673	
CO	111	2046.82	2046.16	10	673		CO	111	2097.62	2096.95	3	673	
CO	111	2048.02	2047.36	30	673		CO	111	2098.30	2097.64	10	673	
CO	111	2048.41	2047.75	3	673		CO	111	2105.84	2105.17	3	64.	673
CO	111	2049.09	2048.44	5	673		CO	111	2111.82	2111.15	1	673	
CO	111	2052.77	2052.11	10	673		CO	111	2120.49	2119.82	3	673	
CO	111	2053.77	2053.11	200	673	65.	CO	111	2121.89	2121.22	5	673	
CO	111	2053.98	2053.32	2	673		CO	111	2124.74	2124.07	5	673	
CO	111	2056.87	2056.21	100	673	65.	CO	111	2134.82	2134.15	10	673	
CO	111	2062.83	2062.17	10	673		CO	111	2135.55	2134.88	2	673	
CO	111	2072.67	2072.01	5	673		CO	111	2136.81	2136.14	3	673	
CO	111	2073.91	2073.25	3	673		CO	111	2137.98	2137.31	5	673	
CO	111	2074.18	2073.52	3	673		CO	111	2172.94	2172.26	5	70.	673
							CO	111	2193.94	2193.26	8	70.	673
							CO	111	2268.613	2267.910	5	673	
							CO	111	2322.38	2321.67	2	673	
							CO	111	2349.56	2348.80	1	673	
							CO	111	2439.50	2438.76	3	74.	673
							CO	111	2452.90	2452.16	10	74.	673
							CO	111	2482.42	2481.67	5	673	
							CO	111	2515.69	2514.93	2	673	
							CO	111	2535.74	2534.98	2	673	
							CO	111	2540.41	2539.65	2	673	
							CO	111	2570.12	2569.35	2	673	
							CO	111	2812.58	2811.75	20	27.	673
							CO	111	2860.86	2860.03	5	27.	673
							CO	111	2889.15	2888.31	10	27.	673
							CO	111	2916.12	2915.26	5	27.	673

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CO	III	2934.13	2933.27	10	27.	673		CO	VI	3328.0	3327.0			108	F
CO	III	2954.97	2954.11	1		673		CO	VI	3337.9	3336.9			108	F
CO	III	2972.17	2971.30	5	37.	673		CO	VI	3342.5	3341.5			108	F
CO	III	2974.54	2973.68	1		673		CO	VI	3368.5	3367.5			108	F
CO	III	2978.88	2978.01	10	37.	673		CO	VI	3389.2	3388.2			108	F
CO	III	2987.00	2986.13	2	37.	673		CO	VI	3399.5	3398.5			108	F
CO	III	2990.91	2990.04	2	37.	673		CO	VI	3404.3	3403.3			108	F
CO	III	2992.76	2991.89	20	37.	673		CO	VI	3445.1	3444.1			108	F
CO	III	3011.79	3010.92	25	37.	673		CO	VI	3466.7	3465.7			108	F
CO	III	3019.29	3018.41	3		673		CO	VI	3477.6	3476.6			108	F
CO	III	3025.80	3024.92	2		673		CO	VI	3482.5	3481.5			108	F
CO	III	3076.78	3075.89	5		673									
CO	III	3098.63	3097.74	2		673		CR	I	2000.60	1999.95	35	48.	341	
CO	III	3117.59	3116.68	10		673		CR	I	2001.25	2000.60	20	48.	341	
CO	III	3152.31	3151.40	2		673		CR	I	2004.20	2003.55	5	49.	341	
CO	III	3181.55	3180.64	2		673		CR	I	2005.59	2004.94	8	49.	341	
CO	III	3233.04	3232.11	20	44.	673		CR	I	2006.41	2005.76	10	48.	341	
CO	III	3250.17	3249.24	2		673									
CO	III	3260.61	3259.68	20	44.	673		CR	I	2025.01	2024.36	1	46.	488	
CO	III	3270.16	3269.23	2		673		CR	I	2026.52	2025.86	15	47.	341	
CO	III	3288.63	3287.68	10	44.	673		CR	I	2027.10	2026.44	12		341	
CO	III	3306.32	3305.38	15	44.	673		CR	I	2028.79	2028.13	12	47.	341	
CO	III	3452.24	3451.25	10		673		CR	I	2028.99	2028.33	10	47.	341	
CO	VI	2951.0	2950.1			108	F	CR	I	2029.33	2028.68	5	46.	488	
CO	VI	2957.2	2956.3			108	F	CR	I	2030.08	2029.42	15	47.	341	
CO	VI	2965.4	2964.5			108	F	CR	I	2030.81	2030.15	1		341	
CO	VI	2990.6	2989.7			108	F	CR	I	2031.93	2031.27	15		341	
CO	VI	2999.1	2998.2			108	F	CR	I	2033.31	2032.65	1		341	
CO	VI	3024.6	3023.7			108	F	CR	I	2033.61	2032.95	5	47.	341	
CO	VI	3040.0	3039.1			108	F	CR	I	2034.90	2034.24	35	47.	341	
CO	VI	3059.6	3058.7			108	F	CR	I	2037.00	2036.34	8	47.	341	
CO	VI	3102.2	3101.3			108	F	CR	I	2038.30	2037.72	1	45.	341	
CO	VI	3273.8	3272.9			108	F	CR	I	2038.87	2038.21	7		341	
CO	VI	3278.2	3277.3			108	F	CR	I	2039.64	2038.98	1		341	
CO	VI	3286.5	3285.6			108	F	CR	I	2039.96	2039.30	35	47.	341	
CO	VI	3296.3	3295.4			108	F	CR	I	2043.38	2042.72	8	45.	341	
CO	VI	3300.7	3299.8			108	F	CR	I	2043.72	2043.06	10	47.	341	
CO	VI	3307.9	3307.0			108	F	CR	I	2049.97	2049.31	8	45.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2084.75	2084.08	10		341		CR	I	2162.93	2162.25	10	44.	341	
CR	I	2095.67	2095.00	12	2.	341		CR	I	2163.15	2162.47	30	44.	341	
CR	I	2096.07	2095.40	10	2.	341		CR	I	2168.36	2167.68	4	44.	341	
CR	I	2096.50	2095.83	8	2.	341		CR	I	2172.12	2171.44	4		341	
CR	I	2107.02	2106.35	3		341		CR	I	2176.87	2176.19	3		341	
CR	I	2144.92	2144.24	1		341		CR	I	2182.21*	2181.53	4		341	
CR	I	2148.70	2148.02	10		341		CR	I	2186.68	2185.99	4		341	
CR	I	2150.93	2150.25	1		341		CR	I	2187.56	2186.87	5	43.	341	
CR	I	2152.95	2152.27	10	44.	341		CR	I	2188.78	2188.09	6	43.	341	
CR	I	2153.25	2152.57	15	44.	341		CR	I	2191.51	2190.83	2	43.	488	
CR	I	2155.12	2154.44	25	44.	341		CR	I	2192.33	2191.64	8	43.	341	
CR	I	2155.77	2155.09	15	44.	341		CR	I	2195.59	2194.90	18	43.	341	
CR	I	2158.42	2157.74	30	44.	341		CR	I	2199.01	2198.32	22	43.	341	
CR	I	2158.68	2158.00	15	44.	341		CR	I	2199.60	2198.91	3	43.	488	
CR	I	2161.18	2160.50	4	44.	341		CR	I	2205.89	2205.20	15	43.	341	
								CR	I	2209.45	2208.76	5	42.	341	
								CR	I	2211.07	2210.38	7	42.	341	
								CR	I	2215.00	2214.31	8	42.	341	
								CR	I	2221.11	2220.42	10	42.	341	
								CR	I	2228.91	2228.22	18	42.	341	
								CR	I	2259.78	2259.08	12	41.	341	
								CR	I	2262.32	2261.68	18	41.	341	
								CR	I	2262.85	2262.15	7	41.	341	
								CR	I	2263.02	2262.32	15	41.	341	
								CR	I	2264.70	2264.00	5		341	
								CR	I	2267.36	2266.66	18	41.	341	
								CR	I	2267.77	2267.07	6		341	
								CR	I	2268.34	2267.64	15	41.	341	
								CR	I	2268.83	2268.13	18	41.	341	
								CR	I	2271.99	2271.29	3		341	
								CR	I	2274.32	2273.62	18	41.	341	
								CR	I	2276.01	2275.31	25	41.	341	
								CR	I	2276.71	2276.01	15		341	
								CR	I	2277.01	2276.31	18	41.	341	
								CR	I	2282.42	2281.71	20		341	
								CR	I	2285.21	2284.50	7		341	
								CR	I	2285.38	2284.67	25	41.	341	
								CR	I	2286.59	2285.88	25		341	
								CR	I	2287.08	2286.37	20	41.	341	
								CR	I	2288.82	2288.11	3		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2292.45	2291.74	10		341		CR	I	2356.70	2355.98	1		341	
CR	I	2294.57	2293.86	1		341		CR	I	2362.31	2361.59	2		341	
CR	I	2299.05	2298.34	1		341		CR	I	2362.91	2362.19	15	40.	341	
CR	I	2300.13	2299.42	1		341		CR	I	2365.45	2364.73	150	1.	341	
CR	I	2305.94	2305.23	2		341		CR	I	2365.85	2365.13	5	39.	341	
CR	I	2306.31	2305.60	2		341		CR	I	2366.63	2365.91	125	1.	341	
CR	I	2308.42	2307.71	1		341		CR	I	2366.86	2366.14	25	40.	341	
CR	I	2312.17	2311.46	4		341		CR	I	2367.03	2366.31	50	39.	341	
CR	I	2321.10	2320.39	3		341		CR	I	2367.52	2366.81	100	1.	341	
CR	I	2323.68	2322.97	2		341		CR	I	2368.01	2367.29	3		341	
CR	I	2324.93	2324.22	1		341		CR	I	2368.58	2367.86	10	10.	341	
CR	I	2325.17	2324.45	2		341		CR	I	2369.18	2368.46	3		341	
CR	I	2326.95	2326.21	2		341		CR	I	2369.21	2368.49	12	39.	341	
CR	I	2327.98	2327.26	3		341		CR	I	2371.09	2370.37	35	39.	341	
CR	I	2330.35	2329.63	10	40.	341		CR	I	2371.38	2370.66	3		341	
CR	I	2331.43	2330.71	8		341		CR	I	2371.91	2371.18	2	70.	341	
CR	I	2333.43	2332.71	1		341		CR	I	2373.61	2372.88	20	39.	341	
CR	I	2333.70	2332.98	7	40.	341		CR	I	2374.42	2373.69	50	39.	341	
CR	I	2334.05	2333.33	8	40.	341		CR	I	2375.79	2375.06	5	39.	341	
CR	I	2338.54	2337.82	4		341		CR	I	2376.14	2375.41	40		341	
CR	I	2339.06	2338.34	2		341		CR	I	2376.71	2375.98	7	70.	341	
CR	I	2339.99	2339.27	15	40.	341		CR	I	2378.67	2377.94	10		341	
CR	I	2340.43	2339.71	4	40.	341		CR	I	2378.81	2378.07	20	70.	341	
CR	I	2341.89	2341.17	20	40.	341		CR	I	2379.90	2379.17	1		341	
CR	I	2342.83	2342.11	5		341		CR	I	2380.29	2379.56	8	38.	341	
CR	I	2343.26	2342.54	3		341		CR	I	2380.58	2379.85	10	39.	341	
CR	I	2344.40	2343.68	4		341		CR	I	2380.68	2379.95	10	10.	341	
CR	I	2344.76	2344.04	1		341		CR	I	2381.19	2380.46	7	10.	341	
CR	I	2345.06	2344.34	1		341		CR	I	2382.09	2381.36	7	70.	341	
CR	I	2346.63	2345.91	1		341		CR	I	2383.09	2382.36	7	39.	341	
CR	I	2347.25	2346.53	3		341		CR	I	2383.40	2382.67	1		341	
CR	I	2349.18	2348.46	1		341		CR	I	2384.031	2383.303	40	39.	341	
CR	I	2349.64	2348.92	25	40.	341		CR	I	2385.11	2384.38	1		341	
CR	I	2349.78	2349.06	1		341		CR	I	2386.45	2385.72	7	39.	341	
CR	I	2350.55	2349.83	4		341		CR	I	2386.91	2386.18	10	38.	341	
CR	I	2351.12	2350.40	12	40.	341		CR	I	2387.50	2386.77	7	36.	341	
CR	I	2351.54	2350.82	1		341		CR	I	2388.19	2387.46	2		341	
CR	I	2353.65	2352.93	5		341		CR	I	2389.94	2389.21	3	37.	341	
CR	I	2355.02	2354.30	15	40.	341		CR	I	2390.16	2389.43	10	36.	341	
CR	I	2355.65	2354.93	1		341		CR	I	2390.82	2390.09	4		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	I	2392.68	2391.95	3	39.	341		CR	I	2434.96	2434.22	4	96.	341	
CR	I	2393.07	2392.34	10	36.	341		CR	I	2435.10	2434.36	2		341	
CR	I	2393.59	2392.86	25	36.	341		CR	I	2435.72	2434.98	1	84.	341	
CR	I	2396.50	2395.77	8	38.	341		CR	I	2436.33	2435.59	1		341	
CR	I	2396.57	2395.84	2	35.	341		CR	I	2436.43	2435.69	1		341	
CR	I	2396.60	2395.89	2	37.	341		CR	I	2438.84	2438.10	3	96.	341	
CR	I	2396.77	2396.04	7	37.	341		CR	I	2438.96	2438.22	2		341	
CR	I	2397.09	2396.36	30	36.	341		CR	I	2439.50	2438.76	2		341	
CR	I	2397.92	2397.19	1		341		CR	I	2439.76	2439.02	7	96.	341	
CR	I	2399.75	2399.02	20	36.	341		CR	I	2442.04	2441.30	3		341	
CR	I	2400.02	2399.29	3	35.	341		CR	I	2443.05	2442.31	2		341	
CR	I	2400.29	2399.56	20	36.	341		CR	I	2443.99	2443.25	2	96.	341	
CR	I	2402.54	2401.81	1		341		CR	I	2446.50	2445.76	1		341	
CR	I	2406.43	2405.70	2	37.	341		CR	I	2447.03	2446.29	2		341	
CR	I	2406.76	2406.03	5	35.	341		CR	I	2447.85	2447.11	2		341	
CR	I	2408.14	2407.41	8	37.	341		CR	I	2448.64	2447.90	1		341	
CR	I	2409.33	2408.60	50	36.	341		CR	I	2449.99	2449.25	2		341	
CR	I	2409.45	2408.72	35	36.	341		CR	I	2450.55	2449.81	3		341	
CR	I	2410.91	2410.18	2	34.	341		CR	I	2452.10	2451.36	3		341	
CR	I	2413.06	2412.33	1		341		CR	I	2452.25	2451.51	3		341	
CR	I	2415.82	2415.09	2		341		CR	I	2452.85	2452.11	2		341	
CR	I	2416.14	2415.41	2		341		CR	I	2453.82	2453.08	1		341	
CR	I	2419.30	2418.56	1		341		CR	I	2453.88	2453.14	2		341	
CR	I	2420.04	2419.30	1		341		CR	I	2456.41	2455.67	1		341	
CR	I	2420.56	2419.82	2	37.	341		CR	I	2456.45	2455.71	2		341	
CR	I	2420.72	2419.98	8	34.	341		CR	I	2457.02	2456.28	8		341	
CR	I	2421.90	2421.16	1		341		CR	I	2457.28	2456.54	1		341	
CR	I	2422.05	2421.31	1		341		CR	I	2457.82	2457.08	4		341	
CR	I	2422.45	2421.71	10		341		CR	I	2458.60	2457.86	4		341	
CR	I	2423.31	2422.57	12	34.	341		CR	I	2459.17	2458.43	3		341	
CR	I	2423.98	2423.24	10		341		CR	I	2459.48	2458.74	2		341	
CR	I	2425.39	2424.65	3		341		CR	I	2460.94	2460.20	3		341	
CR	I	2426.20	2425.46	1		341		CR	I	2461.70	2460.96	2		341	
CR	I	2426.26	2425.52	2		341		CR	I	2464.12	2463.37	2		341	
CR	I	2427.40	2426.66	7	84.	341		CR	I	2464.24	2463.49	5	33.	341	
CR	I	2428.66	2427.92	8	84.	341		CR	I	2464.75	2464.00	1		341	
CR	I	2429.63	2428.89	4	52.	341		CR	I	2466.05	2465.30	3		341	
CR	I	2430.63	2429.89	6	84.	341		CR	I	2466.25	2465.50	5		341	
CR	I	2432.41	2431.67	3	84.	341		CR	I	2466.49	2465.74	4		341	
CR	I	2433.73	2432.99	3		341		CR	I	2466.65	2465.90	2		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	I	2467.09	2466.34	1		341		CR	I	2497.90	2497.15	5		341	
CR	I	2467.24	2466.49	7	33.	341		CR	I	2498.66	2497.91	10	30.	341	
CR	I	2467.89	2467.14	8	33.	341		CR	I	2500.09	2499.34	4		341	
CR	I	2469.08	2468.33	10		341		CR	I	2500.31	2499.56	4		341	
CR	I	2470.10	2469.35	2		341		CR	I	2500.41	2499.66	2	69.	341	
CR	I	2470.45	2469.70	4		341		CR	I	2500.59	2499.84	15	31.	341	
CR	I	2470.81	2470.06	1		341		CR	I	2501.19	2500.44	2		341	
CR	I	2471.02	2470.27	1		341		CR	I	2501.41	2500.66	12	30.	341	
CR	I	2471.63	2470.88	12	33.	341		CR	I	2501.54	2500.79	4	30.	341	
CR	I	2474.28	2473.53	1	33.	341		CR	I	2502.40	2501.65	10	30.	341	
CR	I	2474.83	2474.08	15	32.	341		CR	I	2502.66	2501.91	4		341	
CR	I	2475.02	2474.27	4	33.	341		CR	I	2503.02	2502.27	1		341	
CR	I	2475.30	2474.55	8	32.	341		CR	I	2503.30	2502.55	25	32.	341	
CR	I	2476.82	2476.07	1		341		CR	I	2503.47	2502.72	2	32.	341	
CR	I	2479.89	2479.14	15	32.	341		CR	I	2503.64	2502.89	3	69.	341	
CR	I	2480.69	2479.94	1		341		CR	I	2505.06	2504.31	40	31.	341	
CR	I	2480.85	2480.10	2		341		CR	I	2505.75	2505.00	10	69.	341	
CR	I	2481.98	2481.23	10	32.	341		CR	I	2506.12	2505.37	4		341	
CR	I	2482.40	2481.65	2	32.	341		CR	I	2506.75	2505.99	1		341	
CR	I	2482.75	2482.03	3		341		CR	I	2507.09	2506.33	4	30.	341	
CR	I	2483.00	2482.25	3		341		CR	I	2507.21	2506.45	2		341	
CR	I	2483.37	2482.62	1		341		CR	I	2507.58	2506.82	25	31.	341	
CR	I	2485.61	2484.86	4		341		CR	I	2508.08	2507.32	12	69.	341	
CR	I	2485.79	2485.04	1		341		CR	I	2508.87	2508.11	18	30.	341	
CR	I	2486.23	2485.48	2		341		CR	I	2509.73	2508.97	15	30.	341	
CR	I	2486.58	2485.83	4		341		CR	I	2511.13	2510.37	2	31.	341	
CR	I	2487.72	2486.97	2		341		CR	I	2511.25	2510.49	8	29.	341	
CR	I	2487.99	2487.24	2		341		CR	I	2511.39	2510.69	6	29.	341	
CR	I	2489.37	2488.62	1		341		CR	I	2511.77	2511.01	3		341	
CR	I	2489.56	2488.81	2		341		CR	I	2512.72	2511.96	15	69.	341	
CR	I	2489.71	2488.96	2		341		CR	I	2514.38	2513.62	15	30.	341	
CR	I	2490.23	2489.48	8	32.	341		CR	I	2515.49	2514.73	2		341	
CR	I	2492.10	2491.35	20	31.	341		CR	I	2516.66	2515.90	7	32.	341	
CR	I	2493.31	2492.57	30	31.	341		CR	I	2517.18	2516.42	1	69.	341	
CR	I	2494.35	2493.60	8		341		CR	I	2517.68	2516.92	20	30.	341	
CR	I	2494.50	2493.75	2		341		CR	I	2518.33	2517.57	10	29.	341	
CR	I	2494.64	2493.89	4		341		CR	I	2518.63	2517.87	6	29.	341	
CR	I	2495.83	2495.08	20	31.	341		CR	I	2518.75	2517.99	2	29.	341	
CR	I	2496.43	2495.68	3		341		CR	I	2519.28	2518.52	4	28.	341	
CR	I	2497.05	2496.30	35	31.	341		CR	I	2519.47	2518.71	12	30.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2520.27	2519.51	50	31.	341		CR	I	2552.82	2552.05	2		341	
CR	I	2520.99	2520.23	6	31.	341		CR	I	2553.56	2552.79	10	27.	341	
CR	I	2522.99	2522.23	2		341		CR	I	2553.830	2553.064	15	24.	341	
CR	I	2524.20	2523.44	2		341		CR	I	2554.59	2553.82	1		341	
CR	I	2527.31	2526.55	2		341		CR	I	2556.19	2555.42	6	26.	341	
CR	I	2527.87	2527.11	20	30.	341		CR	I	2556.27	2555.50	10	25.	341	
CR	I	2528.33	2527.57	1		341		CR	I	2557.17	2556.40	2		341	
CR	I	2528.78	2528.02	15	29.	341		CR	I	2557.911	2557.144	25	24.	341	
CR	I	2529.01	2528.25	10	29.	341		CR	I	2558.33	2557.56	4	68.	341	
CR	I	2529.32	2528.56	8	29.	341		CR	I	2558.59	2557.82	1		341	
CR	I	2529.72	2528.96	5		341		CR	I	2559.78	2559.01	1		341	
CR	I	2529.96	2529.20	5	28.	341		CR	I	2561.05	2560.28	4		341	
CR	I	2531.26	2530.44	15	30.	341		CR	I	2561.464	2560.695	30	24.	341	
CR	I	2532.52	2531.76	5	28.	341		CR	I	2561.63	2560.86	2		341	
CR	I	2532.58	2531.82	3		341		CR	I	2562.10	2561.33	5	25.	341	
CR	I	2532.93	2532.17	2		341		CR	I	2562.15	2561.38	4	83.	341	
CR	I	2534.11	2533.35	3		341		CR	I	2564.43	2563.67	2		341	
CR	I	2536.23	2535.47	10	9.	341		CR	I	2565.24	2564.47	7	68.	341	
CR	I	2536.72	2535.96	6		341		CR	I	2565.42	2564.65	6		341	
CR	I	2536.97	2536.21	3		341		CR	I	2565.98	2565.21	3	53.	341	
CR	I	2537.26	2536.50	2		341		CR	I	2566.28	2565.51	5		341	
CR	I	2538.37	2537.61	1		341		CR	I	2566.77	2566.00	10	83.	341	
CR	I	2539.29	2538.53	2	28.	341		CR	I	2567.18	2566.41	1	26.	341	
CR	I	2539.71	2538.95	12	9.	341		CR	I	2567.32	2566.55	12	24.	341	
CR	I	2540.79	2540.03	2		341		CR	I	2568.868	2568.098	12	22.	341	
CR	I	2541.24	2540.48	2		341		CR	I	2569.06	2568.29	3		341	
CR	I	2542.122	2541.359	20	29.	341		CR	I	2569.29	2568.52	8	25.	341	
CR	I	2542.44	2541.68	8	29.	341		CR	I	2569.43	2568.66	5	23.	341	
CR	I	2542.67	2541.91	3	29.	341		CR	I	2570.66	2569.89	2		341	
CR	I	2543.635	2542.872	3	28.	341		CR	I	2570.94	2570.17	1	67.	341	
CR	I	2543.87	2543.11	6		341		CR	I	2571.87	2571.10	4	25.	341	
CR	I	2545.468	2544.702	15	9.	341		CR	I	2572.51	2571.74	30	24.	341	
CR	I	2545.97	2545.21	10	27.	341		CR	I	2572.84	2572.07	5	22.	341	
CR	I	2546.409	2545.645	12	24.	341		CR	I	2572.92	2572.15	12	22.	341	
CR	I	2547.117	2546.353	5		341		CR	I	2575.45	2574.68	10	67.	341	
CR	I	2547.970	2547.206	5		341		CR	I	2575.88	2575.11	2		341	
CR	I	2548.632	2547.868	8		341		CR	I	2576.37	2575.60	2		341	
CR	I	2550.313	2549.548	40	24.	341		CR	I	2576.66	2575.89	8	23.	341	
CR	I	2551.129	2550.364	8	25.	341		CR	I	2577.76	2576.99	2		341	
CR	I	2552.13	2551.36	2	68.	341		CR	I	2578.43	2577.66	20	24.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2579.04	2578.27	10	67.	341		CR	I	2614.96	2614.18	2		341	
CR	I	2579.91	2579.14	12	22.	341		CR	I	2617.24	2616.46	3		341	
CR	I	2580.54	2579.77	4	22.	341		CR	I	2618.22	2617.44	1		341	
CR	I	2580.67	2579.90	4	22.	341		CR	I	2619.054	2618.273	15	20.	341	
CR	I	2580.81	2580.04	7	26.	341		CR	I	2620.285	2619.504	8	58.	341	
CR	I	2581.25	2580.48	2	26.	341		CR	I	2620.65	2619.87	2		341	
CR	I	2583.79	2583.02	8	67.	341		CR	I	2620.760	2619.978	12		341	
CR	I	2585.44	2584.67	10	23.	341		CR	I	2621.262	2620.480	12	20.	341	
CR	I	2588.27	2587.50	3		341		CR	I	2621.622	2620.841	7	82.	341	
CR	I	2588.65	2587.88	2	67.	341		CR	I	2621.84	2621.06	1		341	
CR	I	2588.96	2588.19	12	22.	341		CR	I	2622.88	2622.10	1		341	
CR	I	2590.84	2590.07	5	23.	341		CR	I	2623.648	2622.867	18	21.	341	
CR	I	2591.14	2590.37	2	22.	341		CR	I	2626.163	2625.318	15	20.	341	
CR	I	2591.60	2590.83	1		341		CR	I	2627.383	2626.601	15	21.	341	
CR	I	2591.72	2590.95	1		341		CR	I	2628.620	2627.847	4	66.	341	
CR	I	2591.93	2591.16	2		341		CR	I	2630.598	2629.815	12	20.	341	
CR	I	2592.61	2591.84	50	24.	341		CR	I	2632.84	2632.06	5	66.	341	
CR	I	2594.19	2593.41	8	21.	341		CR	I	2633.770	2632.987	4	19.	341	
CR	I	2594.79	2594.02	8	21.	341		CR	I	2633.87	2633.09	2		341	
CR	I	2596.53	2595.75	1		341		CR	I	2633.97	2633.19	1		341	
CR	I	2601.39	2600.61	8	21.	341		CR	I	2634.16	2633.38	2		341	
CR	I	2602.66	2601.88	4	21.	341		CR	I	2635.01	2634.23	4		341	
CR	I	2602.97	2602.19	3		341		CR	I	2636.22	2635.44	7	81.	341	
CR	I	2603.28	2602.50	6	22.	341		CR	I	2636.561	2635.777	8	81.	341	
CR	I	2603.40	2602.62	1	102.	341		CR	I	2636.879	2636.094	5	19.	341	
CR	I	2604.34	2603.56	10	22.	341		CR	I	2637.67	2636.89	4	19.	341	
CR	I	2604.86	2604.08	2	102.	341		CR	I	2637.952	2637.168	4	19.	341	
CR	I	2605.49	2604.71	3	22.	341		CR	I	2639.677	2638.892	15		341	
CR	I	2606.14	2605.36	7	22.	341		CR	I	2640.21	2639.42	7		341	
CR	I	2606.60	2605.82	6	102.	341		CR	I	2640.33	2639.54	5		341	
CR	I	2609.163	2608.385	10	20.	341		CR	I	2640.841	2640.056	7	20.	341	
CR	I	2610.62	2609.84	1	102.	341		CR	I	2641.007	2640.221	5	81.	341	
CR	I	2611.07	2610.29	8	20.	341		CR	I	2642.904	2642.118	20	66.	341	
CR	I	2612.121	2611.342	3	82.	341		CR	I	2644.91	2644.12	5		341	
CR	I	2612.53	2611.75	1	102.	341		CR	I	2645.02	2644.23	7	19.	341	
CR	I	2612.788	2612.009	7	21.	341		CR	I	2645.42	2644.63	1		341	
CR	I	2612.981	2612.202	8	21.	341		CR	I	2646.09	2645.30	2	19.	341	
CR	I	2613.270	2612.490	7	20.	341		CR	I	2647.61	2646.82	1		341	
CR	I	2614.085	2613.305	10	21.	341		CR	I	2648.96	2648.17	2		341	
CR	I	2614.60	2613.82	8	20.	341		CR	I	2652.091	2651.303	7		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2653.23	2652.44	4		341		CR	I	2694.42	2693.62	4		341	
CR	I	2655.201	2654.412	10		341		CR	I	2694.70	2693.90	5		341	
CR	I	2655.633	2654.844	5	95.	341		CR	I	2695.04	2694.24	2	65.	341	
CR	I	2655.84	2655.05	4	95.	341		CR	I	2695.686	2694.887	10	80.	341	
CR	I	2656.82	2656.02	4	19.	341		CR	I	2696.933	2696.135	10	80.	341	
CR	I	2658.02	2657.23	1		341		CR	I	2697.333	2696.534	20	8.	341	
CR	I	2660.797	2660.006	8	58.	341		CR	I	2697.81	2697.01	15	65.	341	
CR	I	2663.08	2662.29	2		341		CR	I	2697.999	2697.200	8	17.	341	
CR	I	2665.24	2664.44	7	8.	341		CR	I	2698.893	2698.094	4		341	
CR	I	2665.609	2664.818	3		341		CR	I	2698.99	2698.19	2		341	
CR	I	2665.89	2665.10	5		341		CR	I	2701.09	2700.29	3		341	
CR	I	2669.120	2668.328	1		341		CR	I	2701.390	2700.590	20	17.	341	
CR	I	2670.151	2669.359	12	18.	341		CR	I	2702.790	2701.990	30	18.	341	
CR	I	2671.354	2670.562	10		341		CR	I	2703.319	2702.519	15	64.	341	
CR	I	2671.96	2671.17	2		341		CR	I	2703.48	2702.68	2	94.	341	
CR	I	2672.773	2671.980	10	18.	341		CR	I	2703.91	2703.11	2		341	
CR	I	2674.438	2673.644	12	18.	341		CR	I	2704.28	2703.48	12	18.	341	
CR	I	2676.748	2675.955	3		341		CR	I	2705.545	2704.744	12	65.	341	
CR	I	2678.22	2677.43	3		341		CR	I	2705.69	2704.89	15		341	
CR	I	2678.94	2678.15	12	18.	341		CR	I	2706.215	2705.414	12	64.	341	
CR	I	2680.07	2679.28	4		341		CR	I	2706.525	2705.724	10	18.	341	
CR	I	2680.62	2679.82	4		341		CR	I	2706.72	2705.92	2		341	
CR	I	2681.12	2680.33	3	18.	341		CR	I	2707.332	2706.531	20	64.	341	
CR	I	2681.44	2680.64	2		341		CR	I	2708.26	2707.46	2		341	
CR	I	2682.26	2681.46	18	8.	341		CR	I	2708.49	2707.69	7	56.	341	
CR	I	2682.81	2682.01	10	18.	341		CR	I	2708.94	2708.14	2		341	
CR	I	2683.96	2683.16	4		341		CR	I	2709.04	2708.24	3		341	
CR	I	2686.20	2685.40	4	65.	341		CR	I	2710.99	2710.19	25		341	
CR	I	2687.32	2686.52	2		341		CR	I	2712.20	2711.40	6	94.	341	
CR	I	2687.405	2686.608	2		341		CR	I	2714.16	2713.36	6		341	
CR	I	2688.37	2687.57	2		341		CR	I	2714.73	2713.93	3		341	
CR	I	2688.65	2687.85	2		341		CR	I	2715.28	2714.48	4		341	
CR	I	2688.832	2688.035	22	18.	341		CR	I	2715.637	2714.834	8	94.	341	
CR	I	2690.62	2689.82	2	57.	341		CR	I	2716.31	2715.51	2	64.	341	
CR	I	2691.048	2690.251	20	18.	341		CR	I	2716.78	2715.98	4	51.	341	
CR	I	2691.62	2690.82	2		341		CR	I	2716.980	2716.177	20	17.	341	
CR	I	2692.202	2691.404	12	65.	341		CR	I	2717.447	2716.643	10	94.	341	
CR	I	2692.510	2691.712	4	80.	341		CR	I	2718.87	2718.07	7	17.	341	
CR	I	2693.239	2692.441	10	18.	341		CR	I	2719.90	2719.10	4		341	
CR	I	2694.113	2693.315	8	57.	341		CR	I	2722.18	2721.38	2		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2722.890	2722.085	10	71.	341		CR	I	2763.90	2763.09	15	101.	341	
CR	I	2723.79	2722.98	2	51.	341		CR	I	2764.21	2763.40	2		341	
CR	I	2724.71	2723.90	2		341		CR	I	2765.169	2764.355	35	15.	341	
CR	I	2726.16	2725.35	1		341		CR	I	2765.84	2765.03	1		341	
CR	I	2726.67	2725.86	4		341		CR	I	2766.03	2765.21	5	78.	341	
CR	I	2727.302	2726.496	75	7.	341		CR	I	2767.21	2766.39	10	93.	341	
CR	I	2729.25	2728.44	3		341		CR	I	2768.03	2767.21	1		341	
CR	I	2730.39	2729.58	2		341		CR	I	2768.35	2767.53	7	79.	341	
CR	I	2730.66	2729.85	3		341		CR	I	2769.28	2768.46	2	78.	341	
CR	I	2730.88	2730.07	3		341		CR	I	2770.719	2769.902	50	15.	341	
CR	I	2732.703	2731.895	65	7.	341		CR	I	2771.26	2770.44	3	79.	341	
CR	I	2733.76	2732.95	2	51.	341		CR	I	2772.266	2771.449	10	62.	341	
CR	I	2733.81	2733.00	1	51.	341		CR	I	2773.19	2772.37	2		341	
CR	I	2734.32	2733.51	8	56.	341		CR	I	2773.82	2773.00	5		341	
CR	I	2734.57	2733.76	2		341		CR	I	2774.49	2773.67	1		341	
CR	I	2737.273	2736.463	50	7.	341		CR	I	2774.95	2774.13	2	78.	341	
CR	I	2738.031	2737.222	8	57.	341		CR	I	2775.66	2774.84	1		341	
CR	I	2738.98	2738.17	1		341		CR	I	2776.485	2775.668	12	93.	341	
CR	I	2740.204	2739.395	20	63.	341		CR	I	2776.71	2775.89	2		341	
CR	I	2741.887	2741.078	22	63.	341		CR	I	2777.421	2776.603	2		341	
CR	I	2742.974	2742.165	20	63.	341		CR	I	2778.482	2777.664	10	56.	341	
CR	I	2743.79	2742.98	3	16.	341		CR	I	2779.031	2778.213	12	93.	341	
CR	I	2746.344	2745.534	1		341		CR	I	2779.952	2779.134	12	93.	341	
CR	I	2749.085	2748.275	50	15.	341		CR	I	2780.15	2779.33	1	78.	341	
CR	I	2749.39	2748.58	3	63.	341		CR	I	2781.514	2780.695	60	15.	341	
CR	I	2751.32	2750.51	2		341		CR	I	2781.97	2781.15	10	93.	341	
CR	I	2752.39	2751.58	18	15.	341		CR	I	2783.55	2782.73	1		341	
CR	I	2753.02	2752.21	1		341		CR	I	2783.807	2782.988	3		341	
CR	I	2753.663	2752.851	50	15.	341		CR	I	2784.27	2783.45	5		341	
CR	I	2755.633	2754.821	15	79.	341		CR	I	2785.45	2784.63	4	93.	341	
CR	I	2756.05	2755.24	8	16.	341		CR	I	2787.417	2786.597	4		341	
CR	I	2756.10	2755.29	10		341		CR	I	2787.634	2786.814	1		341	
CR	I	2757.58	2756.77	10	79.	341		CR	I	2788.664	2787.843	15		341	
CR	I	2757.899	2757.086	40	15.	341		CR	I	2788.91	2788.09	3		341	
CR	I	2759.049	2758.236	10	101.	341		CR	I	2790.34	2789.52	2		341	
CR	I	2759.29	2758.48	3		341		CR	I	2790.913	2790.092	8	92.	341	
CR	I	2760.48	2759.67	8	79.	341		CR	I	2791.10	2790.28	12	61.	341	
CR	I	2760.65	2759.84	12	101.	341		CR	I	2792.65	2791.83	4		341	
CR	I	2762.549	2761.735	40	15.	341		CR	I	2794.60	2793.78	3	91.	341	
CR	I	2763.20	2762.38	1		341		CR	I	2794.69	2793.87	2		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	I	2795.767	2794.945	7		341		CR	I	2830.556	2829.725	5	75.	341	
CR	I	2796.085	2795.263	5	92.	341		CR	I	2830.734	2829.903	5	89.	341	
CR	I	2796.640	2795.818	12	61.	341		CR	I	2831.73	2830.90	2	14.	341	
CR	I	2797.787	2796.965	1		341		CR	I	2831.870	2831.039	12	88.	341	
CR	I	2800.03	2799.21	1		341		CR	I	2833.625	2832.794	8	89.	341	
CR	I	2800.567	2799.743	3	55.	341		CR	I	2834.875	2834.043	3		341	
CR	I	2801.95	2801.13	15	90.	341		CR	I	2835.99	2835.16	2	88.	341	
CR	I	2802.209	2801.385	1		341		CR	I	2836.074	2835.242	7	55.	341	
CR	I	2802.377	2801.553	3	77.	341		CR	I	2839.323	2838.491	10	88.	341	
CR	I	2802.82	2802.00	6		341		CR	I	2839.846	2839.013	8	54.	341	
CR	I	2803.22	2802.40	2		341		CR	I	2841.125	2840.292	7	14.	341	
CR	I	2803.47	2802.65	8	77.	341		CR	I	2841.715	2840.891	15	88.	341	
CR	I	2806.01	2805.19	2		341		CR	I	2843.752	2842.918	10	99.	341	
CR	I	2806.281	2805.456	1		341		CR	I	2845.21	2844.38	1	88.	341	
CR	I	2808.26	2807.43	1		341		CR	I	2845.48	2844.65	2		341	
CR	I	2810.758	2809.932	10	89.	341		CR	I	2845.86	2845.03	2		341	
CR	I	2811.329	2810.503	5	77.	341		CR	I	2846.858	2846.024	12	99.	341	
CR	I	2811.995	2811.169	12	54.	341		CR	I	2847.32	2846.49	4		341	
CR	I	2814.24	2813.41	1	75.	341		CR	I	2850.14	2849.30	8	99.	341	
CR	I	2814.379	2813.552	4	6.	341		CR	I	2851.30	2850.46	2		341	
CR	I	2814.513	2813.685	4	76.	341		CR	I	2852.40	2851.56	3		341	
CR	I	2815.35	2814.52	10	100.	341		CR	I	2854.73	2853.89	8	99.	341	
CR	I	2816.145	2815.317	2	90.	341		CR	I	2854.78	2853.94	8	14.	341	
CR	I	2817.19	2816.36	1		341		CR	I	2856.06	2855.22	4	54.	341	
CR	I	2817.513	2816.684	12	75.	341		CR	I	2864.322	2863.484	4	99.	341	
CR	I	2817.78	2816.95	7	76.	341		CR	I	2870.85	2870.01	10		341	
CR	I	2819.30	2818.47	12	75.	341		CR	I	2871.016	2870.175	10	55.	341	
CR	I	2821.64	2820.81	15	100.	341		CR	I	2871.863	2871.023	3	60.	341	
CR	I	2821.80	2820.97	2	90.	341		CR	I	2872.469	2871.628	22	12.	341	
CR	I	2822.52	2821.69	3	77.	341		CR	I	2873.12	2872.28	2		341	
CR	I	2822.59	2821.76	6	75.	341		CR	I	2874.022	2873.181	12	60.	341	
CR	I	2823.34	2822.51	2	75.	341		CR	I	2876.28	2875.44	5	54.	341	
CR	I	2823.91	2823.08	1	89.	341		CR	I	2880.11	2879.27	22	12.	341	
CR	I	2824.63	2823.80	1		341		CR	I	2881.26	2880.42	2		341	
CR	I	2825.053	2824.224	10	89.	341		CR	I	2881.46	2880.62	2	13.	341	
CR	I	2825.43	2824.60	2		341		CR	I	2881.98	2881.14	12	60.	341	
CR	I	2825.70	2824.87	1	76.	341		CR	I	2883.60	2882.76	3	55.	341	
CR	I	2826.026	2825.196	8	88.	341		CR	I	2884.14	2883.30	2	60.	341	
CR	I	2827.564	2826.734	20	100.	341		CR	I	2885.67	2884.83	4	74.	341	
CR	I	2828.998	2828.167	12	54.	341		CR	I	2887.49	2886.65	2	54	341	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2887.840	2886.995	25	12.	341	CR	I	2920.59	2919.74	1	87.	341
CR	I	2889.22	2888.38	7	13.	341	CR	I	2921.90	2921.05	1		341
CR	I	2890.064	2889.219	10	12.	341	CR	I	2922.20	2921.35	8	98.	341
CR	I	2890.139	2889.294	25		341	CR	I	2922.97	2922.12	4		341
CR	I	2891.00	2890.16	12	74.	341	CR	I	2925.88	2925.03	4		341
CR	I	2891.20	2890.35	1	13.	341	CR	I	2926.40	2925.55	5		341
CR	I	2891.583	2890.738	10	74.	341	CR	I	2928.62	2927.77	1		341
CR	I	2892.27	2891.42	15	60.	341	CR	I	2930.34	2929.48	4		341
CR	I	2894.102	2893.254	30	12.	341	CR	I	2931.38	2930.53	1		341
CR	I	2895.014	2894.168	20	12.	341	CR	I	2932.15	2931.30	1		341
CR	I	2896.35	2895.50	2		341	CR	I	2932.71	2931.85	1		341
CR	I	2896.521	2895.675	7	74.	341	CR	I	2933.21	2932.35	2		341
CR	I	2896.911	2896.064	6	74.	341	CR	I	2933.43	2932.57	3		341
CR	I	2897.602	2896.756	25	12.	341	CR	I	2934.33	2933.47	6		341
CR	I	2897.99	2897.14	2		341	CR	I	2935.31	2934.45	8		341
CR	I	2899.09	2898.24	4		341	CR	I	2936.390	2935.534	10		341
CR	I	2900.050	2899.203	22	12.	341	CR	I	2938.89	2938.03	8	72.	341
CR	I	2900.53	2899.68	10	87.	341	CR	I	2939.45	2938.59	2		341
CR	I	2901.10	2900.25	12	13.	341	CR	I	2939.69	2938.83	7	50.	341
CR	I	2902.50	2901.65	5		341	CR	I	2940.30	2939.44	5		341
CR	I	2902.83	2901.98	4	74.	341	CR	I	2941.17	2940.31	8		341
CR	I	2903.29	2902.44	4	13.	341	CR	I	2941.89	2941.03	3		341
CR	I	2904.21	2903.36	4		341	CR	I	2942.501	2941.643	2		341
CR	I	2905.522	2904.674	12	87.	341	CR	I	2942.732	2941.874	10	5.	341
CR	I	2906.325	2905.477	25	12.	341	CR	I	2943.98	2943.12	1		341
CR	I	2907.960	2907.111	5		341	CR	I	2945.963	2945.104	3	85.	341
CR	I	2908.554	2907.704	4	87.	341	CR	I	2949.73	2948.87	6	50.	341
CR	I	2909.898	2909.049	30	12.	341	CR	I	2953.02	2952.15	1		341
CR	I	2911.102	2910.252	3		341	CR	I	2956.99	2956.13	1	86.	341
CR	I	2911.732	2910.892	25	12.	341	CR	I	2957.189	2956.321	15	5.	341
CR	I	2911.998	2911.148	22	12.	341	CR	I	2958.14	2957.28	2	50.	341
CR	I	2914.567	2913.716	20	87.	341	CR	I	2959.93	2959.07	7	85.	341
CR	I	2915.075	2914.224	3		341	CR	I	2962.04	2961.18	4		341
CR	I	2917.01	2916.16	12	13.	341	CR	I	2962.63	2961.77	4	85.	341
CR	I	2917.55	2916.70	2		341	CR	I	2963.26	2962.40	6	86.	341
CR	I	2917.92	2917.07	4		341	CR	I	2964.12	2963.26	2		341
CR	I	2918.35	2917.50	3		341	CR	I	2964.60	2963.74	4	50.	341
CR	I	2919.09	2918.24	4		341	CR	I	2967.71	2966.85	7	5.	341
CR	I	2919.57	2918.72	1	13.	341	CR	I	2968.50	2967.64	15	11.	341
CR	I	2920.24	2919.39	2	87.	341	CR	I	2969.06	2968.20	2	50.	341

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	2969.84	2968.98	2		341		CR	I	3015.808	3014.932	75	27.	341	
CR	I	2970.39	2969.53	1	86.	341		CR	I	3016.073	3015.197	50	27.	341	
CR	I	2971.967	2971.102	25	11.	341		CR	I	3017.17	3016.29	3		341	
CR	I	2974.13	2973.26	1	59.	341		CR	I	3018.468	3017.591	100	27.	341	
CR	I	2974.38	2973.51	1		341		CR	I	3019.369	3018.492	50	26.	341	
CR	I	2976.344	2975.478	30	11.	341		CR	I	3019.704	3018.827	40	26.	341	
CR	I	2979.85	2978.98	1		341		CR	I	3020.27	3019.39	3		341	
CR	I	2981.651	2980.784	25	11.	341		CR	I	3022.453	3021.576	200	27.	341	
CR	I	2982.29	2981.42	4	59.	341		CR	I	3024.66	3023.78	1		341	
CR	I	2984.886	2984.014	7	59.	341		CR	I	3025.237	3024.359	125	26.	341	
CR	I	2985.69	2984.82	3	3.	341		CR	I	3025.567	3024.689	12	117.	341	
CR	I	2986.718	2985.849	20	11.	341		CR	I	3026.75	3025.87	3		341	
CR	I	2986.86	2986.01	25	11.	341		CR	I	3030.043	3029.165	50	26.	341	
CR	I	2987.00	2986.13	15	11.	341		CR	I	3031.13	3030.25	100	27.	341	
CR	I	2987.334	2986.466	50	11.	341		CR	I	3032.225	3031.346	50	27.	341	
CR	I	2989.507	2988.638	40	4.	341		CR	I	3032.378	3031.498	20	117.	341	
CR	I	2992.273	2991.403	6	97.	341		CR	I	3035.071	3034.191	50		341	
CR	I	2992.747	2991.877	30	11.	341		CR	I	3036.43	3035.55	2		341	
CR	I	2994.93	2994.06	25	4.	341		CR	I	3037.588	3036.707	6		341	
CR	I	2995.966	2995.094	30	3.	341		CR	I	3037.930	3037.049	75	27.	341	
CR	I	2996.29	2995.42	2	97.	341		CR	I	3040.61	3039.73	15	117.	341	
CR	I	2997.442	2996.571	40	11.	341		CR	I	3040.65	3039.77	25	26.	341	
CR	I	2998.989	2998.118	8	97.	341		CR	I	3041.719	3040.837	100	27.	341	
CR	I	2999.655	2998.783	40	4.	341		CR	I	3043.12	3042.24	1		341	
CR	I	3001.75	3000.88	50	11.	341		CR	I	3044.34	3043.46	2		341	
CR	I	3002.42	3001.55	1	97.	341		CR	I	3044.597	3043.714	3		341	
CR	I	3002.63	3001.76	1		341		CR	I	3044.92	3044.04	1		341	
CR	I	3003.31	3002.44	1		341		CR	I	3046.207	3045.324	2		341	
CR	I	3003.630	3002.757	2		341		CR	I	3046.98	3046.10	2		341	
CR	I	3003.86	3002.99	2		341		CR	I	3047.45	3046.57	3		341	
CR	I	3004.66	3003.79	7		341		CR	I	3048.329	3047.445	15	164.	341	
CR	I	3005.93	3005.06	40	11.	341		CR	I	3048.76	3047.88	6		341	
CR	I	3007.73	3006.86	1		341		CR	I	3050.762	3049.878	8	27.	341	
CR	I	3008.819	3007.945	2		341		CR	I	3053.103	3052.218	18	164.	341	
CR	I	3010.03	3009.16	2		341		CR	I	3054.75	3053.87	100	26.	341	
CR	I	3011.09	3010.22	2		341		CR	I	3055.83	3054.94	3		341	
CR	I	3011.984	3011.109	7		341		CR	I	3055.941	3055.055	5	164.	341	
CR	I	3013.908	3013.033	20	26.	341		CR	I	3057.321	3056.435	3		341	
CR	I	3014.60	3013.72	40	26.	341		CR	I	3059.051	3058.164	6	164.	341	
CR	I	3015.632	3014.756	50	27.	341		CR	I	3061.511	3060.624	2	164.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	I	3061.90	3061.01	2	164.	341		CR	I	3111.885	3110.986	8		341	
CR	I	3062.53	3061.64	15	55.	341		CR	I	3112.212	3111.312	2		341	
CR	I	3062.702	3061.814	10		341		CR	I	3113.862	3112.962	5		341	
CR	I	3062.94	3062.05	2	55.	341		CR	I	3115.00	3114.10	1		341	
CR	I	3064.53	3063.64	1		341		CR	I	3115.355	3114.455	6		341	
CR	I	3064.72	3063.83	2		341		CR	I	3115.738	3114.835	10		341	
CR	I	3065.953	3065.065	25	184.	341		CR	I	3116.406	3115.505	5	163.	341	
CR	I	3068.09	3067.20	10	55.	341		CR	I	3119.03	3118.13	3		341	
CR	I	3072.187	3071.297	10	55.	341		CR	I	3119.70	3118.80	4		341	
CR	I	3072.30	3071.41	2	55.	341		CR	I	3120.08	3119.18	3		341	
CR	I	3074.57	3073.68	25	184.	341		CR	I	3120.154	3119.252	20	163.	341	
CR	I	3075.02	3074.13	2	55.	341		CR	I	3120.642	3119.704	20	183.	341	
CR	I	3075.356	3074.465	7	55.	341		CR	I	3121.50	3120.63	10		341	
CR	I	3077.042	3076.151	6		341		CR	I	3122.50	3121.60	3		341	
CR	I	3077.46	3076.57	6	55.	341		CR	I	3123.901	3122.998	4		341	
CR	I	3078.727	3077.835	30	184.	341		CR	I	3126.815	3125.911	8		341	
CR	I	3081.604	3080.712	6	184.	341		CR	I	3128.492	3127.589	5		341	
CR	I	3082.81	3081.92	1		341		CR	I	3130.66	3129.76	2		341	
CR	I	3083.049	3082.157	40		341		CR	I	3132.118	3131.213	20	183.	341	
CR	I	3084.94	3084.05	2		341		CR	I	3133.721	3132.816	18	183.	341	
CR	I	3085.472	3084.579	6	184.	341		CR	I	3134.875	3133.969	5		341	
CR	I	3087.679	3086.785	8		341		CR	I	3135.88	3134.97	8		341	
CR	I	3088.428	3087.534	10		341		CR	I	3136.09	3135.18	1		341	
CR	I	3093.602	3092.708	50		341		CR	I	3136.823	3135.917	7	183.	341	
CR	I	3093.728	3092.833	20		341		CR	I	3138.53	3137.62	3		341	
CR	I	3095.178	3094.283	1		341		CR	I	3139.11	3138.20	15	183.	341	
CR	I	3096.260	3095.385	15		341		CR	I	3139.22	3138.31	8		341	
CR	I	3096.75	3095.85	15		341		CR	I	3141.27	3140.36	5		341	
CR	I	3097.412	3096.516	10		341		CR	I	3142.792	3141.885	12	116.	341	
CF	I	3097.600	3096.704	10		341		CR	I	3144.65	3143.74	2		341	
CR	I	3099.16	3098.26	1		341		CR	I	3145.30	3144.39	12	92.	341	
CR	I	3100.394	3099.497	4		341		CR	I	3146.53	3145.62	10		341	
CR	I	3101.36	3100.46	1		341		CR	I	3149.35	3148.44	20	115.	341	
CR	I	3105.604	3104.706	7	163.	341		CR	I	3150.12	3149.21	1		341	
CR	I	3106.473	3105.574	5	163.	341		CR	I	3151.56	3150.65	4		341	
CR	I	3106.74	3105.84	1		341		CR	I	3152.640	3151.703	3		341	
CR	I	3110.24	3109.34	20	163.	341		CR	I	3153.798	3152.888	12	116.	341	
CR	I	3110.71	3109.81	1		341		CR	I	3153.90	3152.99	10		341	
CR	I	3111.65	3110.75	5		341		CR	I	3153.93	3153.02	4		341	
CR	I	3111.765	3110.866	15	163.	341		CR	I	3154.458	3153.541	10	200.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	I	3155.54	3154.62	1		341		CR	I	3232.31	3231.38	2	220.	341	
CR	I	3156.072	3155.161	20	115.	341		CR	I	3234.17	3233.24	18	25.	341	
CR	I	3156.16	3155.25	3		341		CR	I	3235.487	3234.556	8		341	
CR	I	3157.005	3156.094	2		341		CR	I	3236.06	3235.13	6		341	
CR	I	3159.725	3158.814	4		341		CR	I	3236.27	3235.34	1		341	
CR	I	3160.49	3159.58	20	92.	341		CR	I	3237.18	3236.25	3		341	
CR	I	3160.821	3159.909	3		341		CR	I	3238.20	3237.27	6		341	
CR	I	3161.528	3160.617	8	115.	341		CR	I	3238.659	3237.727	30	114.	341	
CR	I	3164.677	3163.764	25	115.	341		CR	I	3239.019	3238.088	20	114.	341	
CR	I	3164.968	3164.055	3	200.	341		CR	I	3239.435	3238.504	10	162.	341	
CR	I	3165.405	3164.492	4		341		CR	I	3239.884	3238.953	6		341	
CR	I	3168.070	3167.156	2		341		CR	I	3240.11	3239.18	4	92.	341	
CR	I	3168.35	3167.44	5		341		CR	I	3241.88	3240.95	18	25.	341	
CR	I	3169.660	3168.745	5		341		CR	I	3243.51	3242.58	2		341	
CR	I	3170.493	3169.578	8	115.	341		CR	I	3245.054	3244.121	20	25.	341	
CR	I	3175.95	3175.03	2		341		CR	I	3245.646	3244.713	4	114.	341	
CR	I	3176.514	3175.598	4		341		CR	I	3246.43	3245.50	12	25.	341	
CR	I	3178.576	3177.659	3		341		CR	I	3246.476	3245.543	25	113.	341	
CR	I	3180.200	3179.283	10	92.	341		CR	I	3248.212	3247.278	15	25.	341	
CR	I	3184.94	3184.02	2		341		CR	I	3249.83	3248.90	1		341	
CR	I	3188.93	3188.02	15	92.	341		CR	I	3249.91	3248.98	2		341	
CR	I	3193.039	3192.118	15	13.	341		CR	I	3250.157	3249.223	01		341	
CR	I	3193.207	3192.287	5		341		CR	I	3251.51	3250.58	10	114.	341	
CR	I	3197.59	3196.67	1		341		CR	I	3251.998	3251.063	3		341	
CR	I	3197.75	3196.83	3		341		CR	I	3252.517	3251.582	18		341	
CR	I	3199.038	3198.116	20	91.	341		CR	I	3252.766	3251.831	40	113.	341	
CR	I	3206.73	3205.81	1		341		CR	I	3254.198	3253.262	10	114.	341	
CR	I	3208.09	3207.17	1		341		CR	I	3255.87	3254.94	2		341	
CR	I	3208.43	3207.51	1		341		CR	I	3258.762	3257.826	40	113.	341	
CR	I	3211.557	3210.633	7	13.	341		CR	I	3260.55	3259.61	2		341	
CR	I	3212.240	3211.316	20	220.	341		CR	I	3260.913	3259.976	25	114.	341	
CR	I	3217.30	3216.37	2		341		CR	I	3263.71	3262.77	1		341	
CR	I	3219.10	3218.17	2		341		CR	I	3266.28	3265.34	1		341	
CR	I	3219.63	3218.70	7		341		CR	I	3266.86	3265.93	1		341	
CR	I	3220.55	3219.62	20	220.	341		CR	I	3267.569	3266.631	15	25.	341	
CR	I	3220.90	3219.97	2		341		CR	I	3267.977	3267.038	3		341	
CR	I	3223.26	3222.33	2		341		CR	I	3271.648	3270.708	8	219.	341	
CR	I	3227.484	3226.555	15		341		CR	I	3272.87	3271.93	4		341	
CR	I	3228.161	3227.232	7	162.	341		CR	I	3276.67	3275.73	2		341	
CR	I	3230.135	3229.206	25	220.	341		CR	I	3276.758	3275.817	3		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	I	3278.815	3277.873	8	219.	341		CR	I	3319.05	3318.10	5		341	
CR	I	3280.287	3279.344	2		341		CR	I	3319.68	3318.73	2		341	
CR	I	3280.89	3279.95	1		341		CR	I	3319.91	3318.96	1		341	
CR	I	3281.05	3280.11	2		341		CR	I	3320.90	3319.95	3		341	
CR	I	3281.30	3280.36	2		341		CR	I	3321.52	3320.57	1		341	
CR	I	3283.50	3282.56	2		341		CR	I	3322.141	3321.188	8		341	
CR	I	3285.78	3284.84	2		341		CR	I	3324.22	3323.27	7		341	
CR	I	3287.298	3286.355	15		341		CR	I	3325.01	3324.06	20		341	
CR	I	3288.66	3287.72	2		341		CR	I	3325.81	3324.86	1		341	
CR	I	3291.89	3290.95	1		341		CR	I	3326.618	3325.664	4		341	
CR	I	3292.33	3291.39	2	161.	341		CR	I	3327.542	3326.588	30		341	
CR	I	3293.01	3292.07	2		341		CR	I	3328.05	3327.10	2		341	
CR	I	3294.76	3293.83	10	219.	341		CR	I	3328.18	3327.23	3		341	
CR	I	3294.85	3293.91	1		341		CR	I	3328.21	3327.26	3		341	
CR	I	3297.783	3296.837	3		341		CR	I	3329.59	3328.64	2		341	
CR	I	3298.28	3297.33	2		341		CR	I	3329.762	3328.807	15	160.	341	
CR	I	3299.260	3298.313	20	161.	341		CR	I	3330.012	3329.058	40	182.	341	
CR	I	3299.34	3298.39	1		341		CR	I	3331.551	3330.596	7		341	
CR	I	3301.74	3300.79	4		341		CR	I	3332.14	3331.19	1		341	
CR	I	3303.14	3302.19	5		341		CR	I	3333.50	3332.54	3		341	
CR	I	3303.821	3302.874	18	161.	341		CR	I	3333.84	3332.88	25	182.	341	
CR	I	3304.27	3303.32	1		341		CR	I	3334.46	3333.50	4		341	
CR	I	3305.34	3304.39	1		341		CR	I	3334.56	3333.61	12		341	
CR	I	3306.181	3305.232	5		341		CR	I	3335.64	3334.68	10		341	
CR	I	3308.703	3307.754	30	78.	341		CR	I	3335.74	3334.78	5		341	
CR	I	3310.187	3309.238	1		341		CR	I	3335.877	3334.922	12	160.	341	
CR	I	3310.78	3309.83	15	161.	341		CR	I	3336.727	3335.771	6		341	
CR	I	3312.25	3311.30	4	78.	341		CR	I	3337.68	3336.72	1		341	
CR	I	3313.024	3312.074	10	78.	341		CR	I	3337.812	3336.855	5		341	
CR	I	3313.657	3312.707	3		341		CR	I	3337.94	3336.98	18	255.	341	
CR	I	3313.973	3313.023	7		341		CR	I	3338.176	3337.219	5		341	
CR	I	3314.678	3313.728	12	161.	341		CR	I	3338.81	3337.85	1		341	
CR	I	3315.14	3314.19	8	78.	341		CR	I	3339.634	3338.677	7		341	
CR	I	3315.27	3314.32	2		341		CR	I	3341.598	3340.641	10		341	
CR	I	3315.754	3314.804	10	161.	341		CR	I	3342.411	3341.454	7		341	
CR	I	3316.15	3315.20	4	78.	341		CR	I	3342.982	3342.025	5	160.	341	
CR	I	3317.180	3316.229	5	78.	341		CR	I	3343.191	3342.233	12		341	
CR	I	3317.447	3316.496	25	255.	341		CR	I	3343.415	3342.457	5		341	
CR	I	3317.55	3316.60	3		341		CR	I	3344.179	3343.221	12	159.	341	
CR	I	3318.01	3317.06	2		341		CR	I	3344.302	3343.344	20	159.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	3344.71	3343.75	5		341		CR	I	3375.55	3374.58	12		341	
CR	I	3345.465	3344.507	10	160.	341		CR	I	3375.71	3374.74	3		341	
CR	I	3346.102	3345.144	9	218.	341		CR	I	3375.892	3374.927	10	181.	341	
CR	I	3346.32	3345.36	8	218.	341		CR	I	3376.05	3375.08	2		341	
CR	I	3346.967	3346.008	40	112.	341		CR	I	3376.29	3375.32	1		341	
CR	I	3347.11	3346.15	7		341		CR	I	3376.559	3375.593	5		341	
CR	I	3347.68	3346.72	30	112.	341		CR	I	3377.10	3376.13	4		341	
CR	I	3347.75	3346.79	10	112.	341		CR	I	3377.363	3376.397	20	254.	341	
CR	I	3348.426	3347.467	7		341		CR	I	3377.594	3376.628	3		341	
CR	I	3350.027	3349.067	20		341		CR	I	3378.05	3377.08	2		341	
CR	I	3350.281	3349.322	20	159.	341		CR	I	3378.21	3377.24	1		341	
CR	I	3351.26	3350.30	4	159.	341		CR	I	3380.135	3379.168	30	5.	341	
CR	I	3351.68	3350.72	1		341		CR	I	3380.55	3379.56	4	54.	341	
CR	I	3352.45	3351.49	3		341		CR	I	3380.82	3379.85	7	54.	341	
CR	I	3352.550	3351.591	25	160.	341		CR	I	3381.52	3380.55	4		341	
CR	I	3352.926	3351.966	40	5.	341		CR	I	3382.30	3381.33	2	236.	341	
CR	I	3353.66	3352.70	1		341		CR	I	3383.036	3382.068	7		341	
CR	I	3353.983	3353.022	15	255.	341		CR	I	3384.51	3383.54	1		341	
CR	I	3354.586	3353.626	7		341		CR	I	3384.596	3383.628	3		341	
CR	I	3355.61	3354.65	1		341		CR	I	3385.211	3384.242	10	54.	341	
CR	I	3357.34	3356.38	3		341		CR	I	3385.617	3384.649	18	54.	341	
CR	I	3357.72	3356.76	1		341		CR	I	3386.282	3385.313	15	236.	341	
CR	I	3358.82	3357.86	2	160.	341		CR	I	3387.482	3386.513	12	236.	341	
CR	I	3360.137	3359.176	6	159.	341		CR	I	3387.685	3386.717	3		341	
CR	I	3361.107	3360.145	6		341		CR	I	3389.674	3388.705	20	54.	341	
CR	I	3363.178	3362.216	25	54.	341		CR	I	3389.863	3388.894	3		341	
CR	I	3363.66	3362.70	10	54.	341		CR	I	3390.41	3389.44	2		341	
CR	I	3365.99	3365.03	1		341		CR	I	3391.736	3390.766	18	236.	341	
CR	I	3366.48	3365.52	10		341		CR	I	3392.05	3391.08	5		341	
CR	I	3367.24	3366.28	1	159.	341		CR	I	3392.33	3391.36	18	254.	341	
CR	I	3368.50	3367.54	10	54.	341		CR	I	3393.03	3392.06	2	254.	341	
CR	I	3369.41	3368.45	2		341		CR	I	3396.99	3396.02	4		341	
CR	I	3371.18	3370.22	8		341		CR	I	3402.11	3401.14	2		341	
CR	I	3371.94	3370.98	4		341		CR	I	3402.69	3401.72	5		341	
CR	I	3372.04	3371.07	6		341		CR	I	3403.88	3402.91	1	254.	341	
CR	I	3372.30	3371.34	3		341		CR	I	3404.561	3403.588	18	254.	341	
CR	I	3373.28	3372.31	2		341		CR	I	3404.955	3403.983	5		341	
CR	I	3374.924	3373.958	6	181.	341		CR	I	3406.191	3405.217	10		341	
CR	I	3375.10	3374.13	1		341		CR	I	3407.84	3406.87	2		341	
CR	I	3375.371	3374.406	4		341		CR	I	3408.20	3407.23	8		341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	3408.98	3408.01	6		341		CR	I	3435.087	3434.106	25	52.	341	
CR	I	3409.34	3408.37	2		341		CR	I	3435.28	3434.30	1		341	
CR	I	3409.53	3408.56	2		341		CR	I	3435.45	3434.47	1		341	
CR	I	3409.63	3408.66	2		341		CR	I	3436.12	3435.14	1		341	
CR	I	3409.91	3408.94	7		341		CR	I	3436.24	3435.26	1		341	
CR	I	3410.34	3409.37	6		341		CR	I	3436.437	3435.479	10	53.	341	
CR	I	3410.73	3409.76	1		341		CR	I	3436.656	3435.676	18	52.	341	
CR	I	3411.00	3410.03	1		341		CR	I	3436.799	3435.818	15	53.	341	
CR	I	3411.99	3411.02	10		341		CR	I	3437.170	3436.190	50	52.	341	
CR	I	3413.238	3412.264	8		341		CR	I	3440.339	3439.358	8		341	
CR	I	3415.065	3414.089	2		341		CR	I	3442.092	3441.109	25	52.	341	
CR	I	3415.33	3414.35	1		341		CR	I	3442.431	3441.449	50	52.	341	
CR	I	3416.286	3415.311	7		341		CR	I	3443.575	3442.592	3		341	
CR	I	3416.56	3415.58	1		341		CR	I	3444.762	3443.779	20	110.	341	
CR	I	3418.96	3417.98	2		341		CR	I	3446.080	3445.097	15	51.	341	
CR	I	3419.644	3418.667	1		341		CR	I	3446.588	3445.604	50	51.	341	
CR	I	3419.79	3418.81	1		341		CR	I	3447.01	3446.03	1		341	
CR	I	3420.64	3419.66	2		341		CR	I	3447.996	3447.012	25	52.	341	
CR	I	3420.87	3419.89	3		341		CR	I	3448.410	3447.426	40	52.	341	
CR	I	3421.99	3421.02	2		341		CR	I	3448.747	3447.762	35	52.	341	
CR	I	3422.43	3421.45	3		341		CR	I	3449.173	3448.188	8		341	
CR	I	3422.65	3421.67	3		341		CR	I	3450.08	3449.10	1		341	
CR	I	3422.69	3421.71	5		341		CR	I	3451.797	3450.811	10		341	
CR	I	3424.024	3423.047	7		341		CR	I	3453.47	3452.48	1		341	
CR	I	3424.156	3423.178	7		341		CR	I	3453.59	3452.60	1		341	
CR	I	3425.44	3424.46	1		341		CR	I	3454.203	3453.217	10	253.	341	
CR	I	3426.95	3425.97	12		341		CR	I	3454.314	3453.328	40	52.	341	
CR	I	3428.60	3427.62	5		341		CR	I	3454.723	3453.737	20	52.	341	
CR	I	3428.63	3427.65	5		341		CR	I	3456.260	3455.273	20	51.	341	
CR	I	3430.04	3429.06	2		341		CR	I	3456.593	3455.607	50	51.	341	
CR	I	3431.13	3430.15	1		341		CR	I	3457.29	3456.31	1		341	
CR	I	3432.258	3431.278	20	53.	341		CR	I	3459.073	3458.085	18	253.	341	
CR	I	3432.563	3431.582	5		341		CR	I	3459.33	3458.34	4		341	
CR	I	3432.674	3431.694	10	53.	341		CR	I	3460.13	3459.14	3		341	
CR	I	3432.84	3431.86	3		341		CR	I	3461.414	3460.426	35	141.	341	
CR	I	3432.973	3431.993	15	53.	341		CR	I	3463.225	3462.237	2		341	
CR	I	3433.291	3432.311	12	53.	341		CR	I	3463.882	3462.894	5		341	
CR	I	3433.821	3432.840	8		341		CR	I	3464.499	3463.511	5		341	
CR	I	3434.570	3433.589	40	52.	341		CR	I	3464.604	3463.616	7		341	
CR	I	3434.66	3433.68	3		341		CR	I	3465.814	3464.825	10	51.	341	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	I	3466.05	3465.06	3		341	
CR	I	3466.227	3465.248	25	51.	341	
CR	I	3466.559	3465.571	12	51.	341	
CR	I	3468.002	3467.012	20	253.	341	
CR	I	3468.703	3467.713	22	110.	341	
CR	I	3469.732	3468.742	12		341	
CR	II	2001.41	2000.76	5	236.	340	
CR	II	2002.01	2001.36	3	54.	340	
CR	II	2002.30	2001.65	4	54.	340	
CR	II	2003.36	2002.71	10	31.	340	
CR	II	2003.64	2002.99	30	31.	340	
CR	II	2004.53	2003.88	35	32.	340	
CR	II	2004.68	2004.03	5	32.	340	
CR	II	2004.89	2004.24	10	53.	340	
CR	II	2004.99	2004.34	35	32.	340	
CR	II	2005.84	2005.19	3	.	340	
CR	II	2006.15	2005.50	4	17.	340	
CR	II	2007.26	2006.61	10	17.	340	
CR	II	2007.56	2006.91	10	54.	340	
CR	II	2007.83	2007.18	20	31.	340	
CR	II	2008.04	2007.39	10	31.	340	
CR	II	2011.78	2011.13	20	3.	340	
CR	II	2012.77	2012.12	4	53.	340	
CR	II	2012.86	2012.21	25	17.	340	
CR	II	2013.08	2012.43	10	53.	340	
CR	II	2013.23	2012.58	20	53.	340	
CR	II	2013.39	2012.74	10	249.	340	
CR	II	2014.30	2013.65	40	3.	340	
CR	II	2016.52	2015.87	15	30.	340	
CR	II	2016.92	2016.27	7	.	340	
CR	II	2017.55	2016.90	7	3.	340	
CR	II	2018.13	2017.48	2	17.	340	
CR	II	2020.53	2019.88	2	.	340	
CR	II	2020.96	2020.31	1	17.	340	
CR	II	2021.34	2020.69	10	17.	340	
CR	II	2022.21	2021.56	20	53.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	II	2022.54	2021.89	5	29.	340	
CR	II	2022.76	2022.10	12	29.	340	
CR	II	2024.68	2024.02	2	.	340	
CR	II	2024.86	2024.20	2	30.	340	
CR	II	2026.24	2025.58	5	2.	340	
CR	II	2028.35	2027.69	8	249.	340	
CR	II	2029.35	2028.69	5	.	340	
CR	II	2029.52	2028.86	5	.	340	
CR	II	2030.50	2029.84	1	.	340	
CR	II	2035.54	2034.88	15	29.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2037.64	2036.98	3	153.	340		CR	II	2080.53	2079.86	10	152.	340	
CR	II	2037.92	2037.26	4	222.	340		CR	II	2085.10	2084.43	4	.	340	
CR	II	2039.30	2038.64	2	222.	340		CR	II	2089.79	2089.12	12	16.	340	
CR	II	2040.56	2039.90	10	2.	340		CR	II	2091.37	2090.70	20	38.	340	
CR	II	2041.08	2040.42	4	28.	340		CR	II	2093.96	2093.29	8	16.	340	
CR	II	2041.34	2040.68	20	28.	340		CR	II	2094.29	2093.62	2	16.	340	
CR	II	2041.68	2041.02	8	28.	340		CR	II	2097.11	2096.42	6	152.	340	
CR	II	2042.23	2041.57	6	28.	340		CR	II	2101.01	2100.34	15	16.	340	
CR	II	2042.46	2041.80	7	28.	340		CR	II	2101.28	2100.61	10	16.	340	
CR	II	2043.44	2042.78	5	135.	340		CR	II	2101.63	2100.96	2	16.	340	
CR	II	2044.59	2043.93	3	.	340		CR	II	2102.36	2101.69	4	.	340	
CR	II	2045.42	2044.76	1	135.	340		CR	II	2103.22	2102.55	5	15.	340	
CR	II	2045.96	2045.30	12	27.	340		CR	II	2103.35	2102.72	7	.	340	
CR	II	2047.64	2046.98	8	28.	340		CR	II	2103.64	2102.97	25	15.	340	
CR	II	2047.98	2047.32	2	153.	340		CR	II	2107.95	2107.28	2	.	340	
CR	II	2050.98	2050.32	10	135.	340		CR	II	2108.59	2107.92	15	16.	340	
CR	II	2055.10	2054.44	4	27.	340		CR	II	2110.52	2109.85	6	.	340	
CR	II	2055.41	2054.75	10	27.	340		CR	II	2111.04	2110.37	5	16.	340	
CR	II	2056.25	2055.59	200	1.	340		CR	II	2111.35	2110.68	4	26.	340	
CR	II	2058.61	2057.95	1	248.	340		CR	II	2111.59	2110.92	5	26.	340	
CR	II	2061.69	2061.03	3	248.	340		CR	II	2111.65	2110.98	10	26.	340	
CR	II	2062.20	2061.54	175	1.	340		CR	II	2111.93	2111.26	4	26.	340	
CR	II	2062.91	2062.25	10	27.	340		CR	II	2112.24	2111.57	3	.	340	
CR	II	2063.87	2063.21	10	52.	340		CR	II	2112.83	2112.16	10	15.	340	
CR	II	2064.42	2063.76	4	52.	340		CR	II	2113.71	2113.04	8	15.	340	
CR	II	2066.12	2065.46	150	1.	340		CR	II	2116.84	2116.17	1	.	340	
CR	II	2066.55	2065.89	10	52.	340		CR	II	2121.93	2121.26	30	79.	340	
CR	II	2067.10	2066.44	2	52.	340		CR	II	2122.17	2121.50	1	.	340	
CR	II	2067.32	2066.66	2	52.	340		CR	II	2127.93	2127.26	7	25.	340	
CR	II	2067.41	2066.75	3	52.	340		CR	II	2128.20	2127.53	8	25.	340	
CR	II	2067.62	2066.96	3	52.	340		CR	II	2130.57	2129.89	50	24.	340	
CR	II	2068.88	2068.22	1	.	340		CR	II	2130.91	2130.22	50	79.	340	
CR	II	2069.04	2068.38	8	27.	340		CR	II	2133.07	2132.38	8	24.	340	
CR	II	2069.29	2068.63	1	.	340		CR	II	2133.30	2132.62	40	24.	340	
CR	II	2073.22	2072.56	2	.	340		CR	II	2133.39	2132.71	35	24.	340	
CR	II	2073.56	2072.90	5	.	340		CR	II	2133.61	2132.93	40	24.	340	
CR	II	2073.87	2073.21	4	.	340		CR	II	2133.72	2133.03	30	24.	340	
CR	II	2077.63	2076.96	30	38.	340		CR	II	2134.18	2133.49	100	23.	340	
CR	II	2079.94	2079.27	20	.	340		CR	II	2134.50	2133.81	18	23.	340	
CR	II	2080.32	2079.65	2	.	340		CR	II	2134.88	2134.20	40	23.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	2135.21	2134.52	100	23.	340		CR	II	2191.77	2191.08	2	221.	340	
CR	II	2135.30	2134.62	75	23.	340		CR	II	2193.80	2193.11	10	.	340	
CR	II	2135.56	2134.88	25	23.	340		CR	II	2193.99	2193.30	20	151.	340	
CR	II	2135.77	2135.09	15	23.	340		CR	II	2196.47	2195.78	4	132.	340	
CR	II	2136.02	2135.34	50	23.	340		CR	II	2197.53	2196.84	15	151.	340	
CR	II	2136.10	2135.42	50	23.	340		CR	II	2197.75	2197.06	2	.	340	
CR	II	2138.18	2137.50	7	284.	340		CR	II	2199.78	2199.09	2	13.	340	
CR	II	2138.64	2137.96	15	134.	340		CR	II	2199.92	2199.23	5	132.	340	
CR	II	2140.01	2139.33	7	14.	340		CR	II	2201.19	2200.50	8	.	340	
CR	II	2140.23	2139.54	10	14.	340		CR	II	2202.73	2202.04	3	.	340	
CR	II	2141.18	2140.50	20	14.	340		CR	II	2202.99	2202.30	3	.	340	
CR	II	2144.54	2143.86	5	284.	340		CR	II	2203.62	2202.93	7	.	340	
CR	II	2144.73	2144.05	15	14.	340		CR	II	2204.58	2203.89	10	13.	340	
CR	II	2146.65	2145.97	15	134.	340		CR	II	2206.03	2205.34	4	247.	340	
CR	II	2146.91	2146.23	10	134.	340		CR	II	2208.77	2208.08	3	.	340	
CR	II	2147.87	2147.19	30	14.	340		CR	II	2208.96	2208.27	2	.	340	
CR	II	2150.78	2150.10	15	22.	340		CR	II	2210.06	2209.37	8	.	340	
CR	II	2151.33	2150.65	20	37.	340		CR	II	2210.12	2209.43	10	.	340	
CR	II	2151.42	2150.74	30	37.	340		CR	II	2212.54	2211.85	20	20.	340	
CR	II	2156.90	2156.22	20	133.	340		CR	II	2212.90	2212.21	15	20.	340	
CR	II	2162.32	2161.66	10	133.	340		CR	II	2212.99	2212.30	3	.	340	
CR	II	2164.08	2163.40	3	.	340		CR	II	2214.25	2213.56	10	21.	340	
CR	II	2165.32	2164.67	7	333.	340		CR	II	2214.37	2213.68	30	247.	340	
CR	II	2167.43	2166.75	10	22.	340		CR	II	2215.77	2215.08	20	247.	340	
CR	II	2168.49	2167.81	3	271.	340		CR	II	2215.99	2215.30	5	12.	340	
CR	II	2171.39	2170.71	50	36.	340		CR	II	2217.01	2216.32	4	.	340	
CR	II	2171.65	2170.97	10	36.	340		CR	II	2218.58	2217.89	7	51.	340	
CR	II	2171.74	2171.06	40	36.	340		CR	II	2219.05	2218.36	6	209.	340	
CR	II	2171.86	2171.18	30	36.	340		CR	II	2219.74	2219.05	2	.	340	
CR	II	2172.23	2171.55	20	36.	340		CR	II	2219.86	2219.17	1	.	340	
CR	II	2179.14	2178.46	3	271.	340		CR	II	2220.70	2220.01	2	21.	340	
CR	II	2180.08	2179.39	1	.	340		CR	II	2221.00	2220.31	1	.	340	
CR	II	2180.40	2179.72	2	221.	340		CR	II	2222.55	2221.86	12	270.	340	
CR	II	2182.23	2181.54	4	221.	340		CR	II	2225.56	2224.87	1	209.	340	
CR	II	2188.39	2187.70	2	.	340		CR	II	2226.13	2225.44	3	270.	340	
CR	II	2189.93	2189.24	3	221.	340		CR	II	2226.82	2225.93	1	50.	340	
CR	II	2190.31	2189.62	7	.	340		CR	II	2226.96	2226.27	15	35.	340	
CR	II	2190.82	2190.13	4	.	340		CR	II	2227.04	2226.35	15	35.	340	
CR	II	2191.21	2190.52	2	132.	340		CR	II	2227.16	2226.47	7	12.	340	
CR	II	2191.61	2190.92	5	209.	340		CR	II	2228.57	2227.88	10	20.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2228.87	2228.18	8	20.	340		CR	II	2258.79	2258.09	40	76.	340	
CR	II	2228.95	2228.26	12	20.	340		CR	II	2263.28	2262.58	2	314.	340	
CR	II	2229.03	2228.34	15	283.	340		CR	II	2263.63	2262.93	1	.	340	
CR	II	2229.53	2228.82	5	270.	340		CR	II	2269.04	2268.34	4	314.	340	
CR	II	2230.88	2230.18	1	.	340		CR	II	2271.71	2271.01	3	.	340	
CR	II	2231.26	2230.57	2	12.	340		CR	II	2280.35	2279.64	1	.	340	
CR	II	2231.72	2231.02	12	78.	340		CR	II	2284.84	2284.13	10	.	340	
CR	II	2232.15	2231.45	15	283.	340		CR	II	2286.98	2286.27	8	48.	340	
CR	II	2234.92	2234.22	5	20.	340		CR	II	2291.82	2291.11	10	131.	340	
CR	II	2235.20	2234.50	7	20.	340		CR	II	2292.56	2291.85	4	.	340	
CR	II	2235.28	2234.58	12	20.	340		CR	II	2295.17	2294.46	8	191.	340	
CR	II	2237.17	2236.47	3	.	340		CR	II	2295.91	2295.20	4	319.	340	
CR	II	2239.51	2238.81	1	12.	340		CR	II	2296.93	2296.22	2	48.	340	
CR	II	2239.94	2239.24	8	20.	340		CR	II	2297.68	2297.17	50	19.	340	
CR	II	2240.21	2239.51	4	20.	340		CR	II	2300.23	2299.52	5	.	340	
CR	II	2242.00	2241.30	15	50.	340		CR	II	2300.79	2300.08	8	319.	340	
CR	II	2242.17	2241.47	3	78.	340		CR	II	2301.29	2300.58	30	149.	340	
CR	II	2242.39	2241.69	15	50.	340		CR	II	2304.74	2304.02	4	130.	340	
CR	II	2242.50	2241.80	30	78.	340		CR	II	2306.23	2305.52	2	149.	340	
CR	II	2243.98	2243.28	40	77.	340		CR	II	2306.65	2305.94	1	.	340	
CR	II	2244.20	2243.50	8	.	340		CR	II	2307.52	2306.81	10	19.	340	
CR	II	2244.32	2243.62	50	77.	340		CR	II	2307.90	2307.19	35	19.	340	
CR	II	2245.53	2244.83	10	35.	340		CR	II	2308.27	2307.56	10	319.	340	
CR	II	2245.60	2244.90	20	35.	340		CR	II	2311.47	2310.75	1	.	340	
CR	II	2246.03	2245.33	7	150.	340		CR	II	2311.67	2310.96	2	.	340	
CR	II	2248.61	2247.91	18	49.	340		CR	II	2314.53	2313.82	3	.	340	
CR	II	2249.00	2248.30	50	49.	340		CR	II	2315.42	2314.71	40	19.	340	
CR	II	2249.26	2248.56	40	49.	340		CR	II	2315.52	2314.81	8	19.	340	
CR	II	2250.02	2249.32	2	49.	340		CR	II	2319.20	2318.49	2	208.	340	
CR	II	2250.48	2249.78	30	49.	340		CR	II	2319.48	2318.77	10	149.	340	
CR	II	2250.61	2249.91	8	35.	340		CR	II	2320.09	2319.38	50	34.	340	
CR	II	2250.68	2249.98	20	49.	340		CR	II	2320.79	2320.08	30	19.	340	
CR	II	2253.07	2252.37	4	150.	340		CR	II	2321.00	2320.29	5	128.	340	
CR	II	2253.99	2253.29	1	.	340		CR	II	2321.10	2320.39	10	19.	340	
CR	II	2256.71	2256.01	50	77.	340		CR	II	2321.65	2320.94	1	129.	340	
CR	II	2257.08	2256.38	12	49.	340		CR	II	2322.66	2321.95	4	208.	340	
CR	II	2257.26	2256.56	2	49.	340		CR	II	2325.76	2325.04	1	.	340	
CR	II	2258.32	2257.62	35	76.	340		CR	II	2326.98	2326.26	3	.	340	
CR	II	2258.46	2257.76	45	76.	340		CR	II	2327.32	2326.61	3	129.	340	
CR	II	2258.66	2257.96	50	76.	340		CR	II	2330.75	2330.03	10	128.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2333.11	2332.39	3	172.	340		CR	II	2362.03	2361.31	1	46.	340	
CR	II	2334.18	2333.46	25	47.	340		CR	II	2362.51	2361.79	3	220.	340	
CR	II	2334.56	2333.84	12	47.	340		CR	II	2362.72	2362.00	1	111.	340	
CR	II	2334.59	2333.87	7	47.	340		CR	II	2362.98	2362.26	2	111.	340	
CR	II	2334.89	2334.17	8	47.	340		CR	II	2364.04	2363.32	1	.	340	
CR	II	2334.96	2334.24	7	47.	340		CR	II	2364.37	2363.65	3	111.	340	
CR	II	2335.09	2334.37	8	47.	340		CR	II	2364.74	2364.02	10	10.	340	
CR	II	2335.13	2334.41	2	47.	340		CR	II	2365.70	2364.98	2	.	340	
CR	II	2335.17	2334.45	5	47.	340		CR	II	2365.87	2365.15	4	111.	340	
CR	II	2335.30	2334.58	10	47.	340		CR	II	2365.98	2365.26	20	203.	340	
CR	II	2335.34	2334.62	5	.	340		CR	II	2366.97	2366.28	1	.	340	
CR	II	2335.55	2334.83	10	47.	340		CR	II	2367.47	2366.75	5	34.	340	
CR	II	2337.14	2336.42	3	129.	340		CR	II	2367.56	2366.84	35	34.	340	
CR	II	2338.46	2337.74	20	128.	340		CR	II	2371.95	2371.23	4	.	340	
CR	II	2338.99	2338.27	1	.	340		CR	II	2373.36	2372.63	2	127.	340	
CR	II	2340.62	2339.90	1	.	340		CR	II	2374.43	2373.70	2	.	340	
CR	II	2345.26	2344.54	20	203.	340		CR	II	2375.30	2374.57	1	.	340	
CR	II	2345.97	2345.25	15	34.	340		CR	II	2376.42	2375.69	4	146.	340	
CR	II	2346.07	2345.35	25	34.	340		CR	II	2377.13	2376.40	5	147.	340	
CR	II	2346.25	2345.53	2	.	340		CR	II	2378.05	2377.32	2	.	340	
CR	II	2347.80	2347.08	2	10.	340		CR	II	2379.01	2378.28	3	45.	340	
CR	II	2348.97	2348.25	3	.	340		CR	II	2379.41	2378.68	5	45.	340	
CR	II	2350.72	2350.00	2	220.	340		CR	II	2379.63	2378.90	3	45.	340	
CR	II	2350.86	2350.14	1	10.	340		CR	II	2382.21	2381.48	50	34.	340	
CR	II	2352.68	2351.96	4	293.	340		CR	II	2382.70	2381.97	2	44.	340	
CR	II	2354.01	2353.29	3	10.	340		CR	II	2382.93	2382.20	5	44.	340	
CR	II	2354.16	2353.44	3	10.	340		CR	II	2386.81	2386.08	3	.	340	
CR	II	2354.26	2353.54	1	.	340		CR	II	2387.76	2387.03	4	127.	340	
CR	II	2354.77	2354.05	3	10.	340		CR	II	2390.48	2389.75	40	146.	340	
CR	II	2355.31	2354.59	3	203.	340		CR	II	2393.28	2392.55	5	.	340	
CR	II	2355.36	2354.64	3	10.	340		CR	II	2393.53	2392.80	4	299.	340	
CR	II	2355.82	2355.10	3	203.	340		CR	II	2394.08	2393.35	4	.	340	
CR	II	2356.34	2355.62	3	293.	340		CR	II	2394.72	2393.99	50	146.	340	
CR	II	2357.30	2356.58	4	208.	340		CR	II	2397.21	2396.48	10	147.	340	
CR	II	2357.68	2356.96	5	46.	340		CR	II	2398.48	2397.75	40	43.	340	
CR	II	2359.54	2358.82	5	148.	340		CR	II	2399.01	2398.28	1	43.	340	
CR	II	2360.86	2360.14	10	208.	340		CR	II	2399.24	2398.51	15	43.	340	
CR	II	2361.47	2360.75	8	46.	340		CR	II	2399.94	2399.21	3	170.	340	
CR	II	2361.61	2360.89	6	46.	340		CR	II	2400.40	2399.67	30	235.	340	
CR	II	2361.81	2361.09	1	46.	340		CR	II	2400.97	2400.24	15	170.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2402.06	2401.41	2	.	340		CR	II	2439.20	2438.46	35	202.	340	
CR	II	2402.80	2402.07	5	299.	340		CR	II	2439.61	2438.87	5	.	340	
CR	II	2403.04	2402.31	2	44.	340		CR	II	2440.62	2439.88	4	.	340	
CR	II	2403.46	2402.73	3	44.	340		CR	II	2441.22	2440.48	2	.	340	
CR	II	2403.71	2402.98	4	71.	340		CR	II	2444.09	2443.35	5	189.	340	
CR	II	2404.27	2403.54	2	.	340		CR	II	2444.82	2444.08	7	190.	340	
CR	II	2404.35	2403.62	3	169.	340		CR	II	2444.94	2444.20	7	190.	340	
CR	II	2404.60	2403.87	10	170.	340		CR	II	2445.83	2445.09	10	190.	340	
CR	II	2404.95	2404.22	3	169.	340		CR	II	2445.88	2445.14	7	.	340	
CR	II	2405.45	2404.72	2	335.	340		CR	II	2446.85	2446.11	10	328.	340	
CR	II	2405.65	2404.92	8	170.	340		CR	II	2447.65	2446.91	15	190.	340	
CR	II	2406.01	2405.28	10	235.	340		CR	II	2448.50	2447.76	3	306.	340	
CR	II	2406.45	2405.72	1	282.	340		CR	II	2450.37	2449.63	25	190.	340	
CR	II	2408.75	2408.02	3	335.	340		CR	II	2450.69	2449.95	25	190.	340	
CR	II	2410.18	2409.45	1	282.	340		CR	II	2451.11	2450.37	20	190.	340	
CR	II	2410.69	2409.96	5	170.	340		CR	II	2451.54	2450.80	5	.	340	
CR	II	2411.16	2410.43	3	170.	340		CR	II	2452.37	2451.63	7	245.	340	
CR	II	2411.48	2410.75	2	235.	340		CR	II	2452.78	2452.04	4	310.	340	
CR	II	2411.74	2411.01	5	170.	340		CR	II	2453.45	2452.71	18	328.	340	
CR	II	2413.79	2413.06	8	170.	340		CR	II	2454.67	2453.90	1	328.	340	
CR	II	2414.37	2413.64	15	170.	340		CR	II	2454.80	2454.06	15	74.	340	
CR	II	2415.96	2415.23	5	335.	340		CR	II	2455.21	2454.47	30	74.	340	
CR	II	2417.14	2416.40	40	235.	340		CR	II	2455.74	2455.00	2	310.	340	
CR	II	2418.05	2417.31	2	282.	340		CR	II	2455.89	2455.15	12	310.	340	
CR	II	2420.12	2419.38	15	43.	340		CR	II	2456.97	2456.23	3	.	340	
CR	II	2420.61	2419.87	15	43.	340		CR	II	2457.68	2456.94	8	310.	340	
CR	II	2420.85	2420.11	25	43.	340		CR	II	2458.33	2457.59	2	281.	340	
CR	II	2421.47	2420.73	2	.	340		CR	II	2460.09	2459.35	8	168.	340	
CR	II	2422.64	2421.90	3	169.	340		CR	II	2460.32	2459.58	3	.	340	
CR	II	2423.67	2422.93	2	169.	340		CR	II	2461.16	2460.42	30	168.	340	
CR	II	2424.27	2423.53	4	.	340		CR	II	2461.29	2460.55	10	.	340	
CR	II	2425.95	2425.21	18	43.	340		CR	II	2461.48	2460.77	15	310.	340	
CR	II	2426.40	2425.66	15	43.	340		CR	II	2462.49	2461.75	2	.	340	
CR	II	2427.86	2427.12	1	.	340		CR	II	2462.68	2461.93	5	245.	340	
CR	II	2428.42	2427.68	4	202.	340		CR	II	2463.10	2462.35	15	168.	340	
CR	II	2429.03	2428.29	2	246.	340		CR	II	2463.57	2462.82	1	168.	340	
CR	II	2431.33	2430.59	1	.	340		CR	II	2464.21	2463.46	8	92.	340	
CR	II	2433.94	2433.20	25	202.	340		CR	II	2465.06	2464.31	4	168.	340	
CR	II	2434.46	2433.72	2	.	340		CR	II	2465.23	2464.48	3	.	340	
CR	II	2438.24	2437.50	1	.	340		CR	II	2465.37	2464.62	7	168.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	II	2465.69	2464.94	8	168.	340		CR	II	2494.03	2493.28	25	93.	340	
CR	II	2466.36	2465.61	18	281.	340		CR	II	2494.35	2493.60	5	.	340	
CR	II	2466.53	2465.78	18	281.	340		CR	II	2495.01	2494.26	10	.	340	
CR	II	2466.97	2466.22	10	74.	340		CR	II	2495.85	2495.10	7	.	340	
CR	II	2467.23	2466.48	25	310.	340		CR	II	2495.95	2495.20	7	.	340	
CR	II	2467.39	2466.64	5	.	340		CR	II	2497.19	2496.44	10	145.	340	
CR	II	2468.87	2468.12	2	.	340		CR	II	2497.35	2496.60	15	.	340	
CR	II	2469.42	2468.67	1	189.	340		CR	II	2497.56	2496.81	40	336.	340	
CR	II	2469.88	2469.13	20	92.	340		CR	II	2498.62	2497.87	10	298.	340	
CR	II	2470.15	2469.40	20	310.	340		CR	II	2498.98	2498.23	2	.	340	
CR	II	2470.70	2469.95	10	309.	340		CR	II	2499.55	2498.80	40	93.	340	
CR	II	2471.56	2470.81	8	92.	340		CR	II	2500.10	2499.35	8	.	340	
CR	II	2471.61	2470.87	12	309.	340		CR	II	2500.38	2499.63	5	42.	340	
CR	II	2475.65	2474.90	20	.	340		CR	II	2500.82	2500.07	5	42.	340	
CR	II	2476.44	2475.69	30	92.	340		CR	II	2500.96	2500.21	7	336.	340	
CR	II	2477.65	2476.90	20	145.	340		CR	II	2502.23	2501.48	25	73.	340	
CR	II	2477.75	2477.00	12	.	340		CR	II	2502.91	2502.16	12	.	340	
CR	II	2478.45	2477.70	15	.	340		CR	II	2503.71	2502.96	2	.	340	
CR	II	2479.53	2478.78	20	.	340		CR	II	2504.16	2503.41	2	298.	340	
CR	II	2480.32	2479.57	20	.	340		CR	II	2504.37	2503.62	3	201.	340	
CR	II	2481.84	2481.09	4	145.	340		CR	II	2504.64	2503.89	4	.	340	
CR	II	2483.23	2482.48	10	92.	340		CR	II	2505.30	2504.55	3	320.	340	
CR	II	2484.00	2483.25	4	.	340		CR	II	2506.20	2505.45	2	.	340	
CR	II	2484.42	2483.67	25	75.	340		CR	II	2506.61	2505.86	20	200.	340	
CR	II	2484.49	2483.74	40	310.	340		CP	II	2506.87	2506.11	8	41.	340	
CR	II	2484.54	2483.79	40	75.	340		CR	II	2507.52	2506.76	5	167.	340	
CR	II	2486.16	2485.41	15	309.	340		CR	II	2507.68	2506.93	4	41.	340	
CR	II	2487.04	2486.29	30	92.	340		CR	II	2508.33	2507.57	10	298.	340	
CR	II	2487.41	2486.66	20	219.	340		CR	II	2509.86	2509.10	12	.	340	
CR	II	2487.61	2486.86	1	234.	340		CR	II	2511.00	2510.24	20	200.	340	
CR	II	2487.78	2487.03	12	310.	340		CR	II	2511.98	2511.22	20	91.	340	
CR	II	2489.05	2488.30	12	93.	340		CR	II	2512.98	2512.22	8	167.	340	
CR	II	2490.03	2489.28	50	92.	340		CR	II	2513.14	2512.38	10	199.	340	
CR	II	2490.21	2489.46	15	.	340		CR	II	2513.56	2512.80	5	.	340	
CR	II	2490.42	2489.67	20	.	340		CR	II	2514.42	2513.66	50	308.	340	
CR	II	2490.82	2490.07	20	219.	340		CR	II	2515.82	2515.06	5	308.	340	
CR	II	2491.50	2490.75	25	.	340		CR	II	2516.65	2515.89	4	110.	340	
CR	II	2493.37	2492.62	40	234.	340		CR	II	2517.33	2516.57	40	.	340	
CR	II	2493.61	2492.86	30	234.	340		CR	II	2518.12	2517.36	20	336.	340	
CR	II	2493.83	2493.08	15	.	340		CR	II	2518.62	2517.86	7	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	II	2519.05	2518.29	100	308.	340		CR	II	2539.30	2538.54	M 2	255.	340	
CR	II	2519.60	2518.84	30	308.	340		CR	II	2540.28	2539.52	M 15	9.	340	
CR	II	2519.84	2519.08	25	91.	340		CR	II	2540.98	2540.22	M 3	72.	340	
CR	II	2520.37	2519.61	15	320.	340		CR	II	2541.24	2540.48	M 2	255.	340	
CR	II	2521.04	2520.28	5	.	34		CR	II	2542.50	2541.74	M 2		340	
CR	II	2521.41	2520.65	40	108.	340		CR	II	2543.14	2542.38	M 3	90.	340	
CR	II	2521.59	2520.83	20	336.	340		CR	II	2543.49	2542.73	M 10	318.	340	
CR	II	2522.26	2521.50	1	.	340		CR	II	2543.90	2543.14	M 30	108.	340	
CR	II	2522.52	2521.76	5	200.	340		CR	II	2545.02	2544.26	M 15	9.	340	
CR	II	2522.77	2522.01	4	9.	340		CR	II	2545.34	2544.58	M 2	90.	340	
CR	II	2523.31	2522.55	20	320.	340		CR	II	2546.26	2545.51	M 1	308.	340	
CR	II	2524.00	2523.24	150	308.	340		CR	II	2546.63	2545.87	M 7	318.	340	
CR	II	2524.38	2523.62	30	308.	340		CR	II	2547.21	2546.45	M 20	108.	340	
CR	II	2524.52	2523.76	15	199.	340		CR	II	2547.80	2547.04	M 1		340	
CR	II	2524.69	2523.93	15	199.	340		CR	II	2548.26	2547.50	M 20		340	
CR	II	2525.31	2524.55	15		340		CR	II	2548.52	2547.76	M 10	71.	340	
CR	II	2526.11	2525.35	20	.	340		CR	II	2548.80	2548.04	M 25	108.	340	
CR	II	2527.06	2526.30	15	320.	340		CR	II	2549.18	2548.42	5	308.	340	
CR	II	2528.16	2527.40	2	308.	340		CR	II	2549.34	2548.58	40	109.	340	
CR	II	2528.33	2527.57	7	9.	340		CR	II	2550.48	2549.72	1	108.	340	
CR	II	2530.24	2529.48	25	9.	340		CR	II	2551.05	2550.28	15	90.	340	
CR	II	2530.66	2529.90	75	308.	340		CR	II	2551.30	2550.54	1		340	
CR	II	2530.94	2530.18	M 100	108.	340		CR	II	2552.02	2551.25	2		340	
CR	II	2530.96	2530.20	M 50	308.	340		CR	II	2552.35	2551.58	50	109.	340	
CR	II	2531.54	2530.78	M 20	126.	340		CR	II	2552.65	2551.88	7	109.	340	
CR	II	2532.60	2531.84	M 25	9.	340		CR	II	2552.92	2552.15	2		340	
CR	II	2533.41	2532.65	M 20		340		CR	II	2554.10	2553.33	3	313.	340	
CR	II	2533.75	2532.99	M 6	110.	340		CR	II	2554.39	2553.62	3	108.	340	
CR	II	2534.21	2533.45	M 10	108.	340		CR	II	2555.00	2554.23	4	313.	340	
CR	II	2535.09	2534.33	M 40	9.	340		CR	II	2555.84	2555.07	4	318.	340	
CR	II	2535.25	2534.49	M 5	244.	340		CR	II	2556.24	2555.47	75		340	
CR	II	2535.72	2534.96	M 3	9.	340		CR	II	2557.74	2556.97	7	232.	340	
CR	II	2536.18	2535.42	M 3		340		CR	II	2558.22	2557.45	10	89.	340	
CR	II	2536.36	2535.60	M 1	308.	340		CR	II	2559.05	2558.28	3		340	
CR	II	2536.78	2536.02	M 2	320.	340		CR	II	2559.12	2558.35	4	125.	340	
CR	II	2537.11	2536.35	M 5	41.	340		CR	II	2559.45	2558.68	4		340	
CR	II	2537.69	2536.93	M 3	41.	340		CR	II	2560.48	2559.71	50	317.	340	
CR	II	2537.95	2537.19	M 2	41.	340		CR	II	2560.53	2559.76	15	126.	340	
CR	II	2539.07	2538.31	M 100	308.	340		CR	II	2561.76	2560.99	20	233.	340	
CR	II	2539.21	2538.45	M 20	308.	340		CR	II	2562.36	2561.59	7	71.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	I	2562.58	2561.81	15	317.	340		CR	II	2580.40	2579.63	7		340	
CR	I	2563.14	2562.37	25	317.	340		CR	II	2580.65	2579.88	4	218.	340	
CR	I	2564.12	2563.35	40	232.	340		CR	II	2581.12	2580.35	4		340	
CR	I	2564.35	2563.58	50	89.	340		CR	II	2581.50	2580.72	10		340	
CR	I	2565.04	2564.27	3		340		CR	II	2581.65	2580.88	1	107.	340	
CR	II	2565.53	2564.76	7		340		CR	II	2581.90	2581.13	1		340	
CR	II	2566.36	2565.59	1		340		CR	II	2582.57	2581.80	5		340	
CR	II	2566.94	2566.17	8	317.	340		CR	II	2582.87	2582.10	20	231.	340	
CR	II	2567.29	2566.52	8	89.	340		CR	II	2583.04	2582.27	15	231.	340	
CR	II	2567.62	2566.85	10	305.	340		CR	II	2583.53	2582.76	7		340	
CR	II	2568.11	2567.34	10	107.	340		CR	II	2583.68	2582.91	5	218.	340	
CR	II	2568.27	2567.50	5	331.	340		CR	II	2584.38	2583.61	12	89.	340	
CR	II	2568.36	2567.59	8	305.	340		CR	II	2584.88	2584.10	50	89.	340	
CR	II	2568.57	2567.80	4		340		CR	II	2585.60	2584.83	10		340	
CR	II	2568.84	2568.07	3	331.	340		CR	II	2586.36	2585.60	15		340	
CR	II	2569.28	2568.51	20	317.	340		CR	II	2586.66	2585.89	2		340	
CR	II	2569.63	2568.86	4	317.	340		CR	II	2587.46	2586.69	4		340	
CR	II	2570.17	2569.40	15	331.	340		CR	II	2587.75	2586.98	3		340	
CR	II	2570.60	2569.83	5		340		CR	II	2588.19	2587.42	35		340	
CR	II	2571.47	2570.70	7	107.	340		CR	II	2588.65	2587.92	4		340	
CR	II	2571.87	2571.10	3	317.	340		CR	II	2589.02	2588.25	12	89.	340	
CR	II	2572.55	2571.78	50	89.	340		CR	II	2589.82	2589.05	15	301.	340	
CR	II	2572.88	2572.11	15	217.	340		CR	II	2590.21	2589.44	1		340	
CR	II	2573.17	2572.40	12	317.	340		CR	II	2590.47	2589.70	30	124.	340	
CR	II	2574.09	2573.32	4	71.	340		CR	II	2591.14	2590.37	20		340	
CR	II	2574.31	2573.54	50	232.	340		CR	II	2591.49	2590.72	75	70.	340	
CR	II	2574.95	2574.18	7	89.	340		CR	II	2593.09	2592.32	2	254.	340	
CR	II	2575.12	2574.35	2		340		CR	II	2593.19	2592.42	3		340	
CR	II	2576.01	2575.24	4		340		CR	II	2593.63	2592.86	3	106.	340	
CR	II	2576.24	2575.47	3	218.	340		CR	II	2593.87	2593.10	1		340	
CR	II	2576.58	2575.81	20	231.	340		CR	II	2594.27	2593.49	8	301.	340	
CR	II	2577.22	2576.45	2	331.	340		CR	II	2594.70	2593.92	3	88.	340	
CR	II	2578.11	2577.34	5		340		CR	II	2594.88	2594.10	4		340	
CR	II	2578.25	2577.48	4	125.	340		CR	II	2595.10	2594.35	7	297.	340	
CR	II	2578.51	2577.74	10	317.	340		CR	II	2595.29	2594.51	1		340	
CR	II	2578.75	2577.97	5	89.	340		CR	II	2595.58	2594.80	1		340	
CR	II	2579.09	2578.31	40	89.	340		CR	II	2596.12	2595.34	4	87.	340	
CR	II	2579.47	2578.70	7		340		CR	II	2596.33	2595.55	25	262.	340	
CR	II	2579.89	2579.12	15	262.	340		CR	II	2596.81	2596.03	25		340	
CR	II	2580.07	2579.30	1		340		CR	II	2596.95	2596.17	40	217.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	2597.65	2596.87	8	144.	340		CR	II	2613.92	2613.14	10		340	
CR	II	2598.22	2597.44	2		340		CR	II	2614.29	2613.51	12	269.	340	
CR	II	2598.84	2598.06	3	261.	340		CR	II	2614.60	2613.82	3	297.	340	
CR	II	2599.26	2598.48	3		340		CR	II	2615.35	2614.57	50		340	
CR	II	2599.51	2598.73	2		340		CR	II	2615.68	2614.90	10	105.	340	
CR	II	2599.82	2599.04	2		340		CR	II	2616.63	2615.85	1		340	
CR	II	2600.43	2599.65	1		340		CR	II	2616.96	2616.18	50		340	
CR	II	2601.51	2600.73	5	87.	340		CR	II	2617.81	2617.03	1	316.	340	
CR	II	2601.82	2601.04	8	243.	340		CR	II	2618.28	2617.50	3	280.	340	
CR	II	2602.08	2601.30	3		340		CR	II	2619.27	2618.49	7	87.	340	
CR	II	2602.36	2601.58	6	88.	340		CR	II	2619.41	2618.63	15	316.	340	
CR	II	2602.63	2601.85	10	124.	340		CR	II	2619.55	2618.77	12		340	
CR	II	2602.82	2602.04	3		340		CR	II	2620.37	2619.59	75	324.	340	
CR	II	2603.78	2603.00	10		340		CR	II	2620.88	2620.10	1	123.	340	
CR	II	2604.03	2603.25	2		340		CR	II	2621.26	2620.48	50	316.	340	
CR	II	2604.51	2603.73	10	105.	340		CR	II	2621.64	2620.86	5		340	
CR	II	2604.94	2604.16	20	105.	340		CR	II	2621.96	2621.18	2		340	
CR	II	2606.41	2605.63	15	280.	340		CR	II	2622.58	2621.80	4		340	
CR	II	2606.85	2606.07	12	105.	340		CR	II	2622.81	2622.03	3	123.	340	
CR	II	2607.31	2606.53	25	63.	340		CR	II	2623.42	2622.64	4		340	
CR	II	2607.43	2606.65	4		340		CR	II	2623.78	2623.00	5	324.	340	
CR	II	2607.84	2607.06	12	87.	340		CR	II	2623.98	2623.20	40	324.	340	
CR	II	2608.41	2607.64	10	105.	340		CR	II	2624.17	2623.39	30	124.	340	
CR	II	2608.63	2607.85	10	242.	340		CR	II	2624.60	2623.82	10	324.	340	
CR	II	2608.68	2607.90	50	70.	340		CR	II	2625.44	2624.66	4		340	
CR	II	2608.95	2608.17	20	105.	340		CR	II	2625.78	2625.00	2		340	
CR	II	2609.07	2608.29	3		340		CR	II	2625.65	2625.87	2	143.	340	
CR	II	2609.38	2608.60	1	143.	340		CR	II	2627.08	2626.30	2		340	
CR	II	2609.58	2608.80	8	87.	340		CR	II	2627.47	2626.69	15	316.	340	
CR	II	2609.89	2609.11	1	261.	340		CR	II	2627.56	2626.78	20	280.	340	
CR	II	2610.02	2609.24	4		340		CR	II	2627.95	2627.17	3	324.	340	
CR	II	2610.33	2609.55	3	105.	340		CR	II	2628.73	2627.95	35	323.	340	
CR	II	2610.82	2610.04	20	324.	340		CR	II	2629.50	2628.72	2	324.	340	
CR	II	2611.48	2610.70	40	316.	340		CR	II	2629.66	2628.88	2		340	
CR	II	2611.59	2610.81	50	316.	340		CR	II	2629.82	2629.04	5	164.	340	
CR	II	2611.82	2611.04	30	124.	340		CR	II	2630.20	2629.42	4	324.	340	
CR	II	2612.40	2611.62	20	105.	340		CR	II	2630.36	2629.58	8	198.	340	
CR	II	2612.84	2612.08	8		340		CR	II	2630.59	2629.81	2		340	
CR	II	2613.12	2612.34	7	316.	340		CR	II	2631.71	2630.93	50	63.	340	
CR	II	2613.34	2612.56	15	105.	340		CR	II	2632.65	2631.87	3		340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2632.88	2632.10	3	144.	340		CR	II	2651.36	2650.57	1	.	340	
CR	II	2633.14	2632.36	20	324.	340		CR	II	2651.59	2650.80	7	143.	340	
CR	II	2633.32	2632.54	15	337.	340		CR	II	2651.94	2651.15	1	.	340	
CR	II	2633.55	2632.77	5	279.	340		CR	II	2652.21	2651.42	4	323.	340	
CR	II	2634.37	2633.59	10	324.	340		CR	II	2652.79	2652.00	30	.	340	
CR	II	2635.02	2634.27	12	.	340		CR	II	2653.08	2652.29	4	.	340	
CR	II	2635.62	2634.84	2	.	340		CR	II	2653.57	2652.78	3	330.	340	
CR	II	2636.53	2635.74	10	.	340		CR	II	2654.04	2653.25	4	330.	340	
CR	II	2637.25	2636.46	10	62.	340		CR	II	2654.36	2653.57	85	8.	340	
CR	II	2637.48	2636.70	3	.	340		CR	II	2654.81	2654.02	4	330.	340	
CR	II	2637.98	2637.20	10	62.	340		CR	II	2655.63	2654.84	1	.	340	
CR	II	2638.26	2637.48	20	198.	340		CR	II	2656.57	2655.78	10	103.	340	
CR	II	2638.71	2637.92	2	.	340		CR	II	2657.92	2657.13	8	.	340	
CR	II	2638.84	2638.05	5	64.	340		CR	II	2658.32	2657.53	15	.	340	
CR	II	2639.31	2638.53	3	324.	340		CR	II	2659.13	2658.34	2	.	340	
CR	II	2639.84	2639.05	8	.	340		CR	II	2659.38	2658.59	100	8.	340	
CR	II	2640.11	2639.32	8	216.	340		CR	II	2659.70	2658.91	40	141.	340	
CR	II	2640.70	2639.91	7	323.	340		CR	II	2660.26	2659.47	10	103.	340	
CR	II	2640.79	2640.00	7	216.	340		CR	II	2660.52	2659.73	8	268.	340	
CR	II	2641.24	2640.45	2	323.	340		CR	II	2661.56	2660.77	8	164.	340	
CR	II	2641.88	2641.09	3	.	340		CR	II	2662.01	2661.22	50	329.	340	
CR	II	2642.09	2641.30	15	323.	340		CR	II	2662.20	2661.41	7	62.	340	
CR	II	2642.58	2641.80	25	242.	340		CR	II	2662.38	2661.59	10	62.	340	
CR	II	2643.39	2642.60	2	330.	340		CR	II	2662.52	2661.73	50	8.	340	
CR	II	2643.81	2643.02	5	104.	340		CR	II	2662.94	2662.15	4	62.	340	
CR	II	2644.10	2643.31	1	323.	340		CR	II	2663.51	2662.72	7	165.	340	
CR	II	2644.33	2643.54	12	123.	340		CR	II	2663.81	2663.02	10	165.	340	
CR	II	2644.98	2644.19	3	.	340		CR	II	2664.07	2663.28	30	329.	340	
CR	II	2645.59	2644.80	2	.	340		CR	II	2664.21	2663.42	75	8.	340	
CR	II	2645.97	2645.18	2	.	340		CR	II	2664.46	2663.67	45	8.	340	
CR	II	2646.53	2645.71	2	.	340		CR	II	2665.07	2664.28	2	.	340	
CR	II	2647.39	2646.60	2	104.	340		CR	II	2666.37	2665.58	30	329.	340	
CR	II	2647.83	2647.04	2	323.	340		CR	II	2666.81	2666.02	80	8.	340	
CR	II	2648.01	2647.22	2	.	340		CR	II	2667.93	2667.21	4	.	340	
CR	II	2648.85	2648.08	15	142.	340		CR	II	2668.68	2667.89	25	329.	340	
CR	II	2649.09	2648.30	8	323.	340		CR	II	2669.50	2668.71	70	8.	340	
CR	II	2649.74	2648.95	2	166.	340		CR	II	2669.86	2669.07	3	.	340	
CR	II	2650.45	2649.66	7	166.	340		CR	II	2670.85	2670.06	30	63.	340	
CR	II	2650.68	2649.89	1	104.	340		CR	II	2671.03	2670.24	25	69.	340	
CR	II	2651.17	2650.38	2	64.	340		CR	II	2671.69	2670.90	3	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2671.81	2671.00	2	61.	340		CR	II	2690.59	2689.79	10	188.	340	
CR	II	2672.59	2671.80	80	8.	340		CR	II	2691.14	2690.34	8	.	340	
CR	II	2673.16	2672.37	15	122.	340		CR	II	2691.21	2690.41	2	186.	340	
CR	II	2673.62	2672.83	90	8.	340		CR	II	2691.83	2691.03	90	85.	340	
CR	II	2674.28	2673.49	3	278.	340		CR	II	2692.79	2691.99	3	277.	340	
CR	II	2674.76	2673.97	8	329.	340		CR	II	2692.91	2692.11	25	84.	340	
CR	II	2674.86	2674.07	8	329.	340		CR	II	2693.44	2692.64	1	322.	340	
CR	II	2675.05	2674.26	7	329.	340		CR	II	2693.80	2693.00	4	140.	340	
CR	II	2676.04	2675.25	6	.	340		CR	II	2694.33	2693.53	45	84.	340	
CR	II	2676.46	2675.67	20	69.	340		CR	II	2694.67	2693.87	7	277.	340	
CR	II	2676.53	2675.74	15	292.	340		CR	II	2695.23	2694.43	4	322.	340	
CR	II	2677.32	2676.53	5	141.	340		CR	II	2695.50	2694.70	7	163.	340	
CR	II	2677.92	2677.13	100	8.	340		CR	II	2696.90	2696.10	4	61.	340	
CR	II	2677.98	2677.19	125	8.	340		CR	II	2697.56	2696.76	20	84.	340	
CR	II	2679.58	2678.79	100	7.	340		CR	II	2698.31	2697.51	25	186.	340	
CR	II	2680.68	2679.89	15	267.	340		CR	II	2698.70	2697.90	30	84.	340	
CR	II	2680.96	2680.16	8	142.	340		CR	II	2698.91	2698.11	8	122.	340	
CR	II	2681.12	2680.32	15	292.	340		CR	II	2699.20	2698.40	100	7.	340	
CR	II	2681.65	2680.85	5	86.	340		CR	II	2699.48	2698.68	35	7.	340	
CR	II	2681.87	2681.07	3	86.	340		CR	II	2699.65	2698.85	30	289.	340	
CR	II	2683.05	2682.25	2	.	340		CR	II	2700.14	2699.34	20	141.	340	
CR	II	2683.30	2682.50	2	.	340		CR	II	2700.64	2699.84	2	.	340	
CR	II	2683.75	2682.95	1	186.	340		CR	II	2701.90	2701.10	30	62.	340	
CR	II	2684.25	2683.45	20	268.	340		CR	II	2702.04	2701.24	20	230.	340	
CR	II	2684.53	2683.73	4	304.	340		CR	II	2702.45	2701.65	15	62.	340	
CR	II	2684.89	2684.09	8	277.	340		CR	II	2702.55	2701.75	12	277.	340	
CR	II	2685.52	2684.72	7	85.	340		CR	II	2703.69	2702.89	5	.	340	
CR	II	2685.84	2685.04	18	122.	340		CR	II	2703.76	2702.96	4	186.	340	
CR	II	2685.99	2685.19	18	85.	340		CR	II	2704.36	2703.56	75	84.	340	
CR	II	2686.46	2685.66	2	.	340		CR	II	2704.65	2703.85	30	7.	340	
CR	II	2686.80	2686.00	8	68.	340		CR	II	2705.53	2704.73	4	.	340	
CR	II	2687.20	2686.40	6	241.	340		CR	II	2706.86	2706.06	8	322.	340	
CR	II	2687.46	2686.66	4	68.	340		CR	II	2709.58	2708.78	65	186.	340	
CR	II	2687.89	2687.09	65	7.	340		CR	II	2710.11	2709.31	60	186.	340	
CR	II	2688.40	2687.60	3	84.	340		CR	II	2711.72	2710.92	65	289.	340	
CR	II	2688.94	2688.14	5	304.	340		CR	II	2711.99	2711.19	20	187.	340	
CR	II	2689.08	2688.28	55	84.	340		CR	II	2713.10	2712.30	80	7.	340	
CR	II	2689.21	2688.41	45	186.	340		CR	II	2713.65	2712.85	10	289.	340	
CR	II	2689.83	2689.03	20	84.	340		CR	II	2715.83	2715.03	5	.	340	
CR	II	2690.00	2689.20	35	85.	340		CR	II	2716.41	2715.61	5	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	2716.77	2715.97	3	186.	340		CR	II	2739.48	2738.67	2	162.	340	
CR	II	2717.69	2716.89	6	186.	340		CR	II	2740.55	2739.74	7	185.	340	
CR	II	2717.85	2717.05	7	163.	340		CR	II	2740.90	2740.09	35	6.	340	
CR	II	2718.31	2717.51	40	7.	340		CR	II	2741.88	2741.07	8	.	340	
CR	II	2718.88	2718.08	12	187.	340		CR	II	2742.83	2742.02	70	6.	340	
CR	II	2719.12	2718.32	40	102.	340		CR	II	2744.44	2743.63	70	6.	340	
CR	II	2719.23	2718.43	5	121.	340		CR	II	2744.75	2743.94	6	184.	340	
CR	II	2720.11	2719.31	3	60.	340		CR	II	2745.40	2744.59	25	334.	340	
CR	II	2720.48	2719.68	3	102.	340		CR	II	2745.78	2744.97	40	58.	340	
CR	II	2720.86	2720.06	50	102.	340		CR	II	2746.22	2745.41	12	185.	340	
CR	II	2721.05	2720.25	40	102.	340		CR	II	2746.96	2746.15	15	138.	340	
CR	II	2721.49	2720.69	15	140.	340		CR	II	2747.02	2746.21	50	58.	340	
CR	II	2723.54	2722.74	70	7.	340		CR	II	2748.57	2747.76	7	185.	340	
CR	II	2724.29	2723.48	30	102.	340		CR	II	2748.75	2747.94	12	.	340	
CR	II	2724.45	2723.64	60	59.	340		CR	II	2749.14	2748.33	4	.	340	
CR	II	2724.85	2724.04	65	102.	340		CR	II	2749.79	2748.98	100	6.	340	
CR	II	2725.36	2724.55	1	.	340		CR	II	2750.63	2749.82	20	253.	340	
CR	II	2725.64	2724.76	1	.	340		CR	II	2751.53	2750.72	100	6.	340	
CR	II	2727.07	2726.26	15	162.	340		CR	II	2751.85	2751.04	4	120.	340	
CR	II	2728.06	2727.25	85	102.	340		CR	II	2752.03	2751.22	4	120.	340	
CR	II	2728.40	2727.59	1	162.	340		CR	II	2752.33	2751.52	3	.	340	
CR	II	2728.98	2728.17	15	162.	340		CR	II	2752.66	2751.85	85	6.	340	
CR	II	2729.74	2728.93	2	162.	340		CR	II	2753.18	2752.37	10	253.	340	
CR	II	2729.96	2729.15	1	.	340		CR	II	2754.47	2753.63	20	58.	340	
CR	II	2730.54	2729.73	6	162.	340		CR	II	2754.71	2753.90	15	.	340	
CR	II	2731.06	2730.25	2	.	340		CR	II	2755.09	2754.28	30	101.	340	
CR	II	2731.85	2731.04	3	.	340		CR	II	2755.47	2754.66	2	.	340	
CR	II	2732.21	2731.40	4	.	340		CR	II	2755.99	2755.18	2	185.	340	
CR	II	2733.22	2732.41	2	185.	340		CR	II	2756.34	2755.53	15	101.	340	
CR	II	2734.74	2733.93	2	.	340		CR	II	2756.62	2755.81	10	101.	340	
CR	II	2734.88	2734.07	3	60.	340		CR	II	2757.11	2756.30	40	101.	340	
CR	II	2735.38	2734.57	15	253.	340		CR	II	2757.70	2756.89	15	101.	340	
CR	II	2736.57	2735.76	12	334.	340		CR	II	2757.77	2756.96	20	100.	340	
CR	II	2737.01	2736.20	2	184.	340		CR	II	2758.53	2757.72	80	6.	340	
CR	II	2737.54	2736.73	5	61.	340		CR	II	2759.42	2758.61	15	139.	340	
CR	II	2737.90	2737.09	15	120.	340		CR	II	2759.80	2758.99	40	252.	340	
CR	II	2738.00	2737.19	3	61.	340		CR	II	2760.04	2759.23	7	.	340	
CR	II	2738.28	2737.47	4	120.	340		CR	II	2760.21	2759.40	50	101.	340	
CR	II	2738.47	2737.66	3	120.	340		CR	II	2760.54	2759.73	30	101.	340	
CR	II	2739.32	2738.51	1	.	340		CR	II	2760.85	2760.04	20	184.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2761.01	2760.20	12	101.	340		CR	II	2783.18	2782.36	40	183.	340	
CR	II	2761.17	2760.36	20	100.	340		CR	II	2783.26	2782.44	3	99.	340	
CR	II	2761.34	2760.53	25	253.	340		CR	II	2783.41	2782.59	28	257.	340	
CR	II	2761.64	2760.83	15	.	340		CR	II	2784.66	2783.84	20	252.	340	
CR	II	2761.97	2761.16	5	60.	340		CR	II	2785.12	2784.30	4	.	340	
CR	II	2763.39	2762.58	140	6.	340		CR	II	2785.92	2785.10	10	99.	340	
CR	II	2763.59	2762.78	10	100.	340		CR	II	2786.14	2785.32	2	266.	340	
CR	II	2764.40	2763.59	20	101.	340		CR	II	2786.51	2785.69	65	183.	340	
CR	II	2764.78	2763.97	12	253.	340		CR	II	2787.12	2786.30	2	183.	340	
CR	II	2765.10	2764.29	15	100.	340		CR	II	2787.28	2786.46	10	252.	340	
CR	II	2765.78	2764.96	10	138.	340		CR	II	2787.95	2787.13	2	307.	340	
CR	II	2765.94	2765.13	4	252.	340		CR	II	2788.12	2787.30	5	196.	340	
CR	II	2766.28	2765.46	20	100.	340		CR	II	2788.42	2787.61	55	58.	340	
CR	II	2766.44	2765.62	12	59.	340		CR	II	2788.72	2787.90	25	259.	340	
CR	II	2766.68	2765.86	20	260.	340		CR	II	2789.56	2788.74	5	119.	340	
CR	II	2767.37	2766.55	150	6.	340		CR	II	2789.90	2789.08	8	99.	340	
CR	II	2768.08	2767.26	10	266.	340		CR	II	2790.21	2789.39	40	327.	340	
CR	II	2768.46	2767.62	20	253.	340		CR	II	2791.46	2790.64	1	327.	340	
CR	II	2768.74	2767.92	3	.	340		CR	II	2791.76	2790.94	5	327.	340	
CR	II	2768.98	2768.16	10	100.	340		CR	II	2792.19	2791.37	3	307.	340	
CR	II	2769.41	2768.59	50	252.	340		CR	II	2792.27	2791.45	5	118.	340	
CR	II	2770.11	2769.29	8	333.	340		CR	II	2792.52	2791.70	7	258.	340	
CR	II	2770.52	2769.70	3	333.	340		CR	II	2792.98	2792.16	80	183.	340	
CR	II	2770.74	2769.92	10	333.	340		CR	II	2793.31	2792.49	4	251.	340	
CR	II	2772.09	2771.27	12	251.	340		CR	II	2793.61	2792.79	4	196.	340	
CR	II	2772.71	2771.89	20	333.	340		CR	II	2794.33	2793.51	3	307.	340	
CR	II	2773.15	2772.33	8	183.	340		CR	II	2794.45	2793.63	10	59.	340	
CR	II	2774.12	2773.30	30	58.	340		CR	II	2795.21	2794.39	5	307.	340	
CR	II	2775.26	2774.44	50	266.	340		CR	II	2796.14	2795.32	2	197.	340	
CR	II	2776.82	2776.00	3	333.	340		CR	II	2799.31	2798.48	4	307.	340	
CR	II	2777.47	2776.65	20	252.	340		CR	II	2799.45	2798.65	35	.	340	
CR	II	2778.88	2778.06	70	266.	340		CR	II	2799.59	2798.77	30	117.	340	
CR	II	2779.09	2778.27	4	118.	340		CR	II	2800.98	2800.16	20	303.	340	
CR	II	2779.33	2778.51	5	138.	340		CR	II	2801.59	2800.77	85	182.	340	
CR	II	2779.76	2778.94	10	276.	340		CR	II	2804.04	2803.22	8	67.	340	
CR	II	2781.12	2780.30	85	183.	340		CR	II	2804.17	2803.35	20	116.	340	
CR	II	2781.71	2780.89	25	58.	340		CR	II	2804.78	2803.96	10	307.	340	
CR	II	2781.89	2781.07	25	260.	340		CR	II	2807.16	2806.34	3	.	340	
CR	II	2782.37	2781.55	4	333.	340		CR	II	2808.46	2807.63	5	.	340	
CR	II	2782.95	2782.13	4	276.	340		CR	II	2808.85	2808.02	20	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2810.10	2809.27	6	197.	340		CR	II	2838.71	2837.88	20	81.	340	
CR	II	2810.39	2809.56	5	197.	340		CR	II	2838.79	2837.96	4	82.	340	
CR	II	2810.45	2809.62	2	.	340		CR	II	2839.61	2838.78	65	250.	340	
CR	II	2810.86	2810.03	20	307.	340		CR	II	2840.06	2839.23	12	.	340	
CR	II	2811.61	2810.78	5	99.	340		CR	II	2840.84	2840.01	85	82.	340	
CR	II	2811.72	2810.89	6	66.	340		CR	II	2841.26	2840.43	12	115.	340	
CR	II	2811.88	2811.05	15	303.	340		CR	II	2841.98	2841.15	2	.	340	
CR	II	2812.28	2811.45	10	66.	340		CR	II	2843.15	2842.32	5	228.	340	
CR	II	2812.83	2812.00	85	182.	340		CR	II	2843.26	2842.43	5	250.	340	
CR	II	2813.14	2812.31	2	312.	340		CR	II	2843.61	2842.78	20	250.	340	
CR	II	2814.38	2813.53	5	99.	340		CR	II	2844.07	2843.24	100	5.	340	
CR	II	2815.05	2814.22	5	83.	340		CR	II	2845.66	2844.83	3	181.	340	
CR	II	2817.66	2816.83	30	58.	340		CR	II	2847.16	2846.32	25	296.	340	
CR	II	2817.83	2817.00	15	307.	340		CR	II	2847.27	2846.44	30	250.	340	
CR	II	2818.40	2817.57	8	116.	340		CR	II	2847.53	2846.70	15	116.	340	
CR	II	2818.79	2817.96	12	182.	340		CR	II	2849.08	2848.15	4	81.	340	
CR	II	2818.91	2818.08	3	67.	340		CR	II	2849.24	2848.40	20	250.	340	
CR	II	2819.19	2818.36	75	182.	340		CR	II	2850.17	2849.33	18	81.	340	
CR	II	2819.49	2818.66	5	67.	340		CR	II	2850.67	2849.83	100	5.	340	
CR	II	2819.99	2819.16	2	83.	340		CR	II	2851.13	2850.29	3	250.	340	
CR	II	2822.84	2822.01	65	182.	340		CR	II	2851.56	2850.72	7	228.	340	
CR	II	2823.21	2822.38	100	82.	340		CR	II	2852.19	2851.35	60	82.	340	
CR	II	2825.37	2824.54	12	.	340		CR	II	2853.11	2852.27	25	250.	340	
CR	II	2826.33	2825.50	20	83.	340		CR	II	2853.51	2852.67	20	250.	340	
CR	II	2826.56	2825.73	4	.	340		CR	II	2853.59	2852.75	7	180.	340	
CR	II	2826.7P	2825.95	7	115.	340		CR	II	2854.02	2853.18	30	81.	340	
CR	II	2826.96	2826.15	10	182.	340		CR	II	2854.10	2853.26	30	296.	340	
CR	II	2827.25	2826.42	7	.	340		CR	II	2854.60	2853.76	8	161.	340	
CR	II	2828.78	2827.95	15	.	340		CR	II	2854.98	2854.14	20	.	340	
CR	II	2829.62	2828.79	15	117.	340		CR	II	2855.07	2854.23	3	161.	340	
CR	II	2830.91	2830.08	8	83.	340		CR	II	2855.42	2854.58	5	161.	340	
CR	II	2831.07	2830.24	10	182.	340		CR	II	2855.49	2854.65	3	.	340	
CR	II	2831.29	2830.46	100	82.	340		CR	II	2855.89	2855.05	35	214.	340	
CR	II	2831.43	2830.60	60	81.	340		CR	II	2856.27	2855.43	8	250.	340	
CR	II	2833.28	2832.45	60	195.	340		CR	II	2856.51	2855.67	100	5.	340	
CR	II	2834.20	2833.37	8	214.	340		CR	II	2857.16	2856.32	20	81.	340	
CR	II	2835.07	2834.24	60	195.	340		CR	II	2857.26	2856.42	4	82.	340	
CR	II	2835.11	2834.28	35	326.	340		CR	II	2857.61	2856.77	40	11.	340	
CR	II	2836.46	2835.63	200	5.	340		CR	II	2858.24	2857.40	40	11.	340	
CR	II	2837.30	2836.47	30	214.	340		CR	II	2858.83	2857.99	20	207.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2859.48	2858.64	30	11.	340		CR	II	2889.17	2888.33	2	160.	340	
CR	II	2859.75	2858.91	75	5.	340		CR	II	2889.58	2888.73	40	238.	340	
CR	II	2861.76	2860.92	85	5.	340		CR	II	2890.03	2889.19	35	11.	340	
CR	II	2863.41	2862.57	125	5.	340		CR	II	2890.35	2889.50	35	207.	340	
CR	II	2865.94	2865.10	150	5.	340		CR	II	2890.67	2889.82	25	160.	340	
CR	II	2866.18	2865.34	30	11.	340		CR	II	2891.91	2891.06	25	240.	340	
CR	II	2866.49	2865.65	20	326.	340		CR	II	2892.05	2891.20	20	238.	340	
CR	II	2866.71	2865.87	50	265.	340		CR	II	2892.25	2891.40	20	194.	340	
CR	II	2867.56	2866.72	100	5.	340		CR	II	2892.72	2891.87	20	291.	340	
CR	II	2867.93	2867.09	65	11.	340		CR	II	2893.59	2892.74	18	.	340	
CR	II	2868.49	2867.65	100	5.	340		CR	II	2893.80	2892.95	20	160.	340	
CR	II	2868.78	2867.94	4	180.	340		CR	II	2894.35	2893.50	4	160.	340	
CR	II	2869.31	2868.47	2	332.	340		CR	II	2895.09	2894.24	25	288.	340	
CR	II	2869.47	2868.63	4	332.	340		CR	II	2895.25	2894.40	10	160.	340	
CR	II	2870.45	2869.61	3	332.	340		CR	II	2895.66	2894.81	18	160.	340	
CR	II	2870.56	2869.72	3	332.	340		CR	II	2895.87	2895.02	18	160.	340	
CR	II	2871.27	2870.43	100	11.	340		CR	II	2896.51	2895.66	5	160.	340	
CR	II	2872.29	2871.45	20	295.	340		CR	II	2897.16	2896.31	30	159.	340	
CR	II	2874.30	2873.46	65	5.	340		CR	II	2897.30	2896.45	40	159.	340	
CR	II	2874.65	2873.81	50	11.	340		CR	II	2897.59	2896.74	35	97.	340	
CR	II	2874.91	2874.07	6	229.	340		CR	II	2898.09	2897.24	10	287.	340	
CR	II	2875.35	2874.51	10	.	340		CR	II	2898.52	2897.67	30	212.	340	
CR	II	2875.87	2875.03	30	265.	340		CR	II	2898.58	2897.73	20	159.	340	
CR	II	2876.81	2875.97	100	11.	340		CR	II	2898.67	2897.82	10	159.	340	
CR	II	2877.08	2876.24	60	5.	340		CR	II	2899.38	2898.53	50	95.	340	
CR	II	2877.14	2876.30	40	288.	340		CR	II	2900.00	2899.15	25	240.	340	
CR	II	2877.50	2876.66	20	263.	340		CR	II	2900.33	2899.48	35	159.	340	
CR	II	2878.81	2877.97	60	5.	340		CR	II	2901.35	2900.50	4	.	340	
CR	II	2879.29	2878.45	50	5.	340		CR	II	2901.85	2901.00	12	97.	340	
CR	II	2880.01	2879.17	10	56.	340		CR	II	2903.45	2902.60	7	275.	340	
CR	II	2880.52	2879.68	3	.	340		CR	II	2903.71	2902.86	10	291.	340	
CR	II	2880.92	2880.08	2	.	340		CR	II	2904.43	2903.58	15	.	340	
CR	II	2881.70	2880.86	75	11.	340		CR	II	2904.82	2903.97	20	97.	340	
CR	II	2882.70	2881.86	55	302.	340		CR	II	2906.42	2905.57	3	238.	340	
CR	II	2882.75	2881.91	45	206.	340		CR	II	2907.02	2906.17	10	227.	340	
CR	II	2885.45	2884.61	1	.	340		CR	II	2907.61	2906.76	2	57.	340	
CR	II	2885.82	2884.98	2	.	340		CR	II	2907.85	2907.00	4	315.	340	
CR	II	2886.13	2885.29	10	.	340		CR	II	2909.14	2908.29	10	97.	340	
CR	II	2887.22	2886.38	7	264.	340		CR	II	2909.98	2909.13	2	315.	340	
CR	II	2888.61	2887.77	20	302.	340		CR	II	2911.49	2910.64	30	211.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	2912.54	2911.69	35	212.	340		CR	II	2936.91	2936.05	3	96.	340	
CR	II	2913.38	2912.53	1	97.	340		CR	II	2937.78	2936.92	25	95.	340	
CR	II	2914.35	2913.50	10	.	340		CR	II	2939.10	2938.24	3	.	340	
CR	II	2915.23	2914.38	2	290.	340		CR	II	2940.30	2939.44	20	325.	340	
CR	II	2916.07	2915.22	10	227.	340		CR	II	2940.64	2939.78	3	237.	340	
CR	II	2916.13	2915.28	15	239.	340		CR	II	2941.08	2940.22	25	294.	340	
CR	II	2916.31	2915.46	30	263.	340		CR	II	2941.28	2940.42	2	96.	340	
CR	II	2916.92	2916.07	10	207.	340		CR	II	2941.83	2940.97	7	206.	340	
CR	II	2917.79	2916.94	2	315.	340		CR	II	2942.18	2941.32	3	95.	340	
CP	II	2918.25	2917.40	1	.	340		CR	II	2942.82	2941.96	35	294.	340	
CR	II	2919.14	2918.29	3	179.	340		CR	II	2943.85	2942.99	3	177.	340	
CR	II	2919.78	2918.93	1	315.	340		CR	II	2944.49	2943.64	4	177.	340	
CR	II	2920.78	2919.93	2	274.	340		CR	II	2946.60	2945.74	7	210.	340	
CR	II	2921.75	2920.90	4	.	340		CR	II	2947.56	2946.70	15	.	340	
CR	II	2921.95	2921.10	5	.	340		CR	II	2947.67	2946.81	50	192.	340	
CR	II	2922.08	2921.23	50	286.	340		CR	II	2948.36	2947.50	25	325.	340	
CR	II	2922.66	2921.81	40	95.	340		CR	II	2949.06	2948.20	3	210.	340	
CR	II	2923.31	2922.46	5	256.	340		CR	II	2949.32	2948.47	3	113.	340	
CR	II	2924.31	2923.46	30	286.	340		CR	II	2949.93	2949.07	2	210.	340	
CR	II	2924.52	2923.67	40	286.	340		CR	II	2950.30	2949.44	20	178.	340	
CR	II	2924.65	2923.80	8	114.	340		CR	II	2950.65	2949.79	10	210.	340	
CR	II	2925.71	2924.86	2	194.	340		CR	II	2950.96	2950.10	10	178.	340	
CR	II	2926.07	2925.22	3	158.	340		CR	II	2951.55	2950.69	7	65.	340	
CR	II	2926.75	2925.90	3	158.	340		CR	II	2952.25	2951.39	10	177.	340	
CR	II	2927.00	2926.15	18	95.	340		CR	II	2952.80	2951.94	10	177.	340	
CR	II	2927.94	2927.09	50	256.	340		CR	II	2953.31	2952.45	12	311.	340	
CR	II	2928.97	2928.12	40	55.	340		CR	II	2954.20	2953.34	35	55.	340	
CR	II	2929.17	2928.32	50	256.	340		CR	II	2954.56	2953.70	45	192.	340	
CR	II	2930.03	2929.18	2	193.	340		CR	II	2955.51	2954.65	10	237.	340	
CR	II	2930.29	2929.44	18	239.	340		CR	II	2955.98	2955.12	10	177.	340	
CR	II	2930.63	2929.78	4	206.	340		CR	II	2956.54	2955.68	2	176.	340	
CR	II	2931.69	2930.83	35	55.	340		CR	II	2957.46	2956.60	10	176.	340	
CR	II	2931.92	2931.07	4	192.	340		CR	II	2958.12	2957.26	4	113.	340	
CR	II	2933.54	2932.69	30	95.	340		CR	II	2958.41	2957.55	5	237.	340	
CR	II	2934.46	2933.60	12	311.	340		CR	II	2958.90	2958.04	4	.	340	
CR	II	2934.81	2933.95	35	95.	340		CR	II	2959.03	2958.17	1	158.	340	
CR	II	2934.99	2934.13	10	.	340		CR	II	2959.37	2958.51	2	226.	340	
CR	II	2935.16	2934.30	20	211.	340		CR	II	2960.40	2959.54	18	210.	340	
CR	II	2935.98	2935.12	60	55.	340		CR	II	2960.81	2959.95	18	177.	340	
CR	II	2936.44	2935.58	4	.	340		CR	II	2962.56	2961.70	25	55.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	2962.58	2961.72	25	177.	340		CR	II	3011.51	3010.64	10	.	340	
CR	II	2964.32	2963.46	20	176.	340		CR	II	3011.80	3010.92	4	321.	340	
CR	II	2966.04	2965.18	2	176.	340		CR	II	3012.29	3011.42	7	55.	340	
CR	II	2966.89	2966.03	40	94.	340		CR	II	3012.88	3012.01	2	87.	340	
CR	II	2969.06	2968.20	3	225.	340		CR	II	3013.21	3012.33	3	137.	340	
CR	II	2969.54	2968.68	15	176.	340		CR	II	3013.35	3012.47	5	.	340	
CR	II	2970.53	2969.67	15	192.	340		CR	II	3016.39	3015.51	50	87.	340	
CR	II	2971.51	2970.65	2	175.	340		CR	II	3018.66	3017.78	10	95.	340	
CR	II	2972.77	2971.90	75	80.	340		CR	II	3025.78	3024.90	3	.	340	
CR	II	2973.44	2972.57	8	237.	340		CR	II	3027.26	3026.38	7	.	340	
CR	II	2973.54	2972.67	7	80.	340		CR	II	3027.52	3026.64	100	95.	340	
CR	II	2973.97	2973.10	12	113.	340		CR	II	3027.74	3026.86	20	41.	340	
CR	II	2975.70	2974.83	4	.	340		CR	II	3029.00	3028.15	75	18.	340	
CR	II	2976.67	2975.80	4	321.	340		CR	II	3032.51	3031.63	3	87.	340	
CR	II	2977.57	2976.70	35	55.	340		CR	II	3033.53	3032.65	4	.	340	
CR	II	2978.52	2977.65	2	112.	340		CR	II	3033.82	3032.94	50	15.	340	
CR	II	2980.60	2979.73	80	80.	340		CR	II	3034.94	3034.06	5	74.	340	
CR	II	2983.56	2982.69	2	.	340		CR	II	3035.42	3034.54	25	94.	340	
CR	II	2985.56	2984.69	10	55.	340		CR	II	3035.87	3034.99	20	137.	340	
CR	II	2985.88	2985.01	7	174.	340		CR	II	3038.92	3038.04	8	154.	340	
CR	II	2986.19	2985.32	75	80.	340		CR	II	3039.39	3038.51	4	41.	340	
CR	II	2987.74	2986.87	8	300.	340		CR	II	3039.68	3038.80	4	.	340	
CR	II	2988.39	2987.52	3	225.	340		CR	II	3040.20	3039.32	4	.	340	
CR	II	2988.91	2988.04	12	80.	340		CR	II	3041.06	3040.18	8	.	340	
CR	II	2990.05	2989.18	70	80.	340		CR	II	3041.79	3040.91	70	65.	340	
CR	II	2993.29	2992.42	10	80.	340		CR	II	3042.61	3041.73	50	95.	340	
CR	II	2993.46	2992.59	7	300.	340		CR	II	3043.67	3042.79	25	47.	340	
CR	II	2993.83	2992.96	10	321.	340		CR	II	3044.77	3043.89	18	48.	340	
CR	II	2994.41	2993.54	7	321.	340		CR	II	3045.11	3044.23	10	154.	340	
CR	II	2995.61	2994.74	20	80.	340		CR	II	3046.41	3045.52	4	48.	340	
CR	II	2999.88	2999.00	1	321.	340		CR	II	3046.50	3045.62	3	.	340	
CR	II	3000.17	2999.30	8	94.	340		CR	II	3047.15	3046.27	1	.	340	
CR	II	3000.83	2999.96	25	137.	340		CR	II	3048.50	3047.62	20	15.	340	
CR	II	3001.52	3000.65	2	321.	340		CR	II	3048.65	3047.77	25	15.	340	
CR	II	3004.79	3003.92	35	94.	340		CR	II	3050.37	3049.49	10	.	340	
CR	II	3005.34	3004.47	3	88.	340		CR	II	3051.02	3050.14	100	65.	340	
CR	II	3005.64	3004.77	2	321.	340		CR	II	3051.62	3050.74	6	95.	340	
CR	II	3008.85	3007.98	6	321.	340		CR	II	3052.25	3051.37	2	.	340	
CR	II	3009.17	3008.30	6	174.	340		CR	II	3052.48	3051.60	6	.	340	
CR	II	3009.54	3008.67	4	75.	340		CR	II	3053.86	3052.97	3	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	3054.54	3053.65	10	64.	340	
CR	II	3056.21	3055.32	5	.	340	
CR	II	3056.33	3055.44	15	33.	340	
CR	II	3057.09	3056.20	3	.	340	
CR	II	3057.55	3056.66	8	48.	340	
CR	II	3058.75	3057.86	12	65.	340	
CR	II	3059.25	3058.36	12	48.	340	
CR	II	3060.27	3059.38	10	15.	340	
CR	II	3060.42	3059.53	25	15.	340	
CR	II	3062.47	3061.58	8	41.	340	
CR	II	3062.91	3062.02	5	.	340	
CR	II	3064.14	3063.25	6	.	340	
CR	II	3064.71	3063.82	7	32.	340	
CR	II	3065.21	3064.32	3	.	340	
CR	II	3068.07	3067.18	20	15.	340	
CR	II	3069.91	3069.02	1	.	340	
CR	II	3071.91	3071.02	2	41.	340	
CR	II	3072.46	3071.57	7	47.	340	
CR	II	3072.74	3071.85	3	.	340	
CR	II	3073.08	3072.19	2	64.	340	
CR	II	3073.36	3072.47	8	32.	340	
CR	II	3074.13	3073.24	15	47.	340	
CR	II	3075.56	3074.67	3	73.	340	
CR	II	3075.79	3074.90	3	73.	340	
CR	II	3078.13	3077.24	18	103.	340	
CR	II	3078.48	3077.59	5	32.	340	
CR	II	3078.67	3077.78	25	103.	340	
CR	II	3080.23	3079.34	15	102.	340	
CR	II	3081.12	3080.23	4	.	340	
CR	II	3083.93	3083.04	3	.	340	
CR	II	3084.50	3083.61	10	47.	340	
CR	II	3085.34	3084.45	15	71.	340	
CR	II	3086.24	3085.35	10	47.	340	
CR	II	3088.79	3087.90	20	102.	340	
CR	II	3090.61	3089.72	1	195.	340	
CR	II	3091.80	3090.91	2	126.	340	
CR	II	3094.07	3093.17	3	47.	340	
CR	II	3094.37	3093.47	40	125.	340	
CR	II	3094.87	3093.97	15	47.	340	
CR	II	3095.83	3094.93	10	86.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	3096.10	3095.20	3	86.	340	
CR	II	3096.38	3095.48	12	.	340	
CR	II	3097.01	3096.11	35	126.	340	
CR	II	3099.06	3098.16	18	86.	340	
CR	II	3099.78	3098.88	4	86.	340	
CR	II	3100.78	3099.88	2	.	340	
CR	II	3103.45	3102.55	3	116.	340	
CR	II	3104.37	3103.47	30	71.	340	
CR	II	3105.19	3104.29	3	102.	340	
CR	II	3108.47	3107.57	50	125.	340	
CR	II	3109.55	3108.65	10	55.	340	
CR	II	3109.88	3108.98	3	.	340	
CR	II	3112.84	3111.94	15	55.	340	
CR	II	3114.07	3113.17	3	.	340	
CR	II	3114.49	3113.59	5	186.	340	
CR	II	3116.17	3115.27	12	54.	340	
CR	II	3116.55	3115.65	20	46.	340	
CR	II	3117.65	3116.75	20	126.	340	
CR	II	3118.18	3117.28	15	46.	340	
CR	II	3119.04	3118.14	10	55.	340	
CR	II	3119.54	3118.64	60	5.	340	
CR	II	3121.26	3120.36	75	5.	340	
CR	II	3121.94	3121.04	8	72.	340	
CR	II	3122.11	3121.21	6	.	340	
CR	II	3122.73	3121.83	10	72.	340	
CR	II	3122.85	3121.95	7	55.	340	
CR	II	3123.49	3122.59	30	54.	340	
CR	II	3125.13	3124.23	3	.	340	
CR	II	3125.84	3124.94	40	5.	340	
CR	II	3125.92	3125.02	60	70.	340	
CR	II	3126.36	3125.46	7	55.	340	
CR	II	3126.69	3125.79	5	186.	340	
CR	II	3128.98	3128.08	4	.	340	
CR	II	3129.59	3128.69	40	5.	340	
CR	II	3131.45	3130.55	7	175.	340	
CR	II	3132.43	3131.53	5	55.	340	
CR	II	3132.95	3132.05	100	5.	340	
CR	II	3135.24	3134.33	25	94.	340	
CR	II	3136.25	3135.34	20	124.	340	
CR	II	3136.65	3135.74	30	94.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	II	3137.59	3136.68	45	5.	340		CR	II	3177.52	3176.60	4	.	340	
CR	II	3138.01	3137.10	10	.	340		CR	II	3178.42	3177.50	1	.	340	
CR	II	3138.35	3137.44	2	125.	340		CR	II	3178.82	3177.90	1	40.	340	
CR	II	3138.44	3137.53	8	54.	340		CR	II	3179.72	3178.80	7	173.	340	
CR	II	3139.12	3138.21	7		340		CR	II	3180.38	3179.46	8	82.	340	
CR	II	3140.81	3139.90	10	54.	340		CR	II	3181.62	3180.70	75	9.	340	
CR	II	3141.12	3140.21	25	124.	340		CR	II	3182.34	3181.42	20	9.	340	
CR	II	3141.57	3140.66	1	124.	340		CR	II	3184.25	3183.33	40	82.	340	
CR	II	3142.71	3141.80	4	175.	340		CR	II	3185.28	3184.36	15	123.	340	
CR	II	3143.64	3142.73	10	85.	340		CR	II	3187.67	3186.75	18	69.	340	
CR	II	3143.88	3142.97	8	125.	340		CR	II	3190.77	3189.85	12	123.	340	
CR	II	3144.58	3143.67	7	53.	340		CR	II	3191.60	3190.68	6	174.	340	
CR	II	3144.81	3143.90	7	94.	340		CR	II	3194.35	3193.41	2	52.	340	
CR	II	3146.02	3145.11	15	5.	340		CR	II	3195.54	3194.62	10	70.	340	
CR	II	3146.67	3145.76	15	85.	340		CR	II	3197.27	3196.35	3	9.	340	
CR	II	3148.13	3147.22	50	5.	340		CR	II	3197.31	3196.39	5	115.	340	
CR	II	3148.75	3147.84	1	93.	340		CR	II	3197.85	3196.93	20	9.	340	
CR	II	3150.02	3149.11	4	84.	340		CR	II	3198.01	3197.08	75	9.	340	
CR	II	3150.73	3149.82	20	54.	340		CR	II	3198.92	3198.00	15	.	340	
CR	II	3151.02	3150.11	20	54.	340		CR	II	3199.66	3198.74	2	.	340	
CR	II	3153.12	3152.21	40	71.	340		CR	II	3200.78	3199.86	10	101.	340	
CR	II	3154.95	3154.04	3	53.	340		CR	II	3201.36	3200.44	10	114.	340	
CR	II	3155.01	3154.10	3	69.	340		CR	II	3202.18	3201.26	25	114.	340	
CR	II	3158.43	3157.52	2	93.	340		CR	II	3203.39	3202.47	7	46.	340	
CR	II	3158.94	3158.03	10	70.	340		CR	II	3203.43	3202.51	15	173.	340	
CR	II	3160.01	3159.10	7	5.	340		CR	II	3204.45	3203.53	15	46.	340	
CR	II	3160.77	3159.86	3	54.	340		CR	II	3206.03	3205.11	25	114.	340	
CR	II	3161.02	3160.11	5	54.	340		CR	II	3206.27	3205.35	2	.	340	
CR	II	3163.37	3162.46	10	46.	340		CR	II	3208.93	3208.01	8	114.	340	
CR	II	3164.28	3163.37	3	.	340		CR	II	3209.52	3208.60	20	9.	340	
CR	II	3164.84	3163.93	10	69.	340		CR	II	3210.11	3209.19	50	9.	340	
CR	II	3165.19	3164.28	4	46.	340		CR	II	3212.41	3211.49	12	.	340	
CR	II	3165.39	3164.48	1	118.	340		CR	II	3213.45	3212.52	20	81.	340	
CR	II	3169.30	3168.39	7	.	340		CR	II	3213.83	3212.90	18	114.	340	
CR	II	3170.11	3169.20	25	123.	340		CR	II	3214.39	3213.46	3	153.	340	
CR	II	3170.77	3169.86	2	173.	340		CR	II	3217.48	3216.55	20	82.	340	
CR	II	3171.62	3170.71	2	.	340		CR	II	3218.33	3217.40	50	9.	340	
CR	II	3172.99	3172.08	40	71.	340		CR	II	3220.06	3219.13	18	140.	340	
CR	II	3174.50	3173.58	15	83.	340		CR	II	3220.72	3219.79	10	63.	340	
CR	II	3174.85	3173.93	2	175.	340		CR	II	3222.32	3221.39	1	.	340	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	II	3226.31	3225.38	12	140.	340		CR	II	3277.18	3276.24	1	172.	340	
CR	II	3226.37	3225.44	8	45.	340		CR	II	3279.72	3278.78	2	113.	340	
CR	II	3227.28	3226.35	4	114.	340		CR	II	3280.48	3279.54	5	121.	340	
CR	II	3228.41	3227.48	3	153.	340		CR	II	3283.98	3283.04	20	159.	340	
CR	II	3230.31	3229.38	8	46.	340		CR	II	3286.89	3285.95	20	137.	340	
CR	II	3230.81	3229.88	10	114.	340		CR	II	3287.28	3286.34	1	172.	340	
CR	II	3231.76	3230.83	2	122.	340		CR	II	3288.98	3288.04	15	62.	340	
CR	II	3232.56	3231.63	8	122.	340		CR	II	3292.17	3291.23	6	.	340	
CR	II	3233.31	3232.38	2	52.	340		CR	II	3292.69	3291.75	40	68.	340	
CR	II	3234.99	3234.06	50	63.	340		CR	II	3295.90	3294.95	6	.	340	
CR	II	3236.17	3235.24	4	139.	340		CR	II	3296.37	3295.42	50	51.	340	
CR	II	3239.44	3238.51	10	.	340		CR	II	3302.16	3301.21	15	137.	340	
CR	II	3239.69	3238.76	50	63.	340		CR	II	3305.68	3304.73	5	120.	340	
CR	II	3240.99	3240.06	7	140.	340		CR	II	3307.90	3306.95	15	150.	340	
CR	II	3242.30	3241.37	4	153.	340		CR	II	3307.97	3307.02	50	51.	340	
CR	II	3242.91	3241.98	2	.	340		CR	II	3309.10	3308.15	18	137.	340	
CR	II	3246.22	3245.29	5	62.	340		CR	II	3311.60	3310.65	35	120.	340	
CR	II	3247.93	3247.00	4	62.	340		CR	II	3312.86	3311.91	40	51.	340	
CR	II	3248.26	3247.33	3	91.	340		CR	II	3313.13	3312.18	40	51.	340	
CR	II	3250.44	3249.51	12	.	340		CR	II	3314.02	3313.07	20	119.	340	
CR	II	3251.52	3250.59	1	.	340		CR	II	3314.48	3313.53	2	.	340	
CR	II	3251.71	3250.78	10	61.	340		CR	II	3315.00	3314.05	18	158.	340	
CR	II	3253.42	3252.49	25	.	340		CR	II	3315.52	3314.57	35	150.	340	
CR	II	3256.24	3255.30	15	138.	340		CR	II	3316.23	3315.28	12	51.	340	
CR	II	3256.54	3255.60	3	153.	340		CR	II	3322.25	3321.30	5	.	340	
CR	II	3258.94	3258.00	3	152.	340		CR	II	3323.64	3322.69	12	51.	340	
CR	II	3259.70	3258.76	30	159.	340		CR	II	3324.47	3323.52	8	51.	340	
CR	II	3262.48	3261.54	4	159.	340		CR	II	3324.98	3324.03	25	4.	340	
CR	II	3262.82	3261.88	4	.	340		CR	II	3325.04	3324.09	20	120.	340	
CR	II	3265.20	3264.26	35	61.	340		CR	II	3325.29	3324.34	50	80.	340	
CR	II	3267.19	3266.25	8	121.	340		CR	II	3329.29	3328.34	25	4.	340	
CR	II	3269.41	3268.47	10	62.	340		CR	II	3330.40	3329.45	4	150.	340	
CR	II	3270.04	3269.10	30	.	340		CR	II	3331.94	3330.98	1	53.	340	
CR	II	3270.70	3269.76	15	138.	340		CR	II	3333.09	3332.13	2	91.	340	
CR	II	3271.07	3270.13	40	61.	340		CR	II	3334.08	3333.12	2	.	340	
CR	II	3271.97	3271.03	1	.	340		CR	II	3336.23	3335.27	40	80.	340	
CR	II	3273.67	3272.73	1	.	340		CR	II	3336.41	3335.45	30	92.	340	
CR	II	3273.81	3272.87	4	.	340		CR	II	3336.89	3335.93	4	119.	340	
CR	II	3274.13	3273.19	3	.	340		CR	II	3337.12	3336.16	2	14.	340	
CR	II	3276.85	3275.91	10	151.	340		CR	II	3337.28	3336.32	40	4.	340	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CR	II	3339.85	3338.89	10		340	CR	II	3393.97	3393.00	35	21.	340
CR	II	3340.77	3339.81	50	4.	340	CR	II	3394.82	3393.85	30	21.	340
CR	II	3340.86	3339.90	20	32.	340	CR	II	3395.28	3394.31	35	21.	340
CR	II	3342.93	3341.97	5	119.	340	CR	II	3396.59	3395.62	20	100.	340
CR	II	3343.53	3342.57	50	4.	340	CR	II	3400.51	3399.54	18	100.	340
CR	II	3348.10	3347.14	5	.	340	CR	II	3401.05	3400.08	2	67.	340
CR	II	3348.79	3347.83	40	4.	340	CR	II	3403.40	3402.43	25	21.	340
CR	II	3350.30	3349.34	6	4.	340	CR	II	3404.27	3403.30	100	3.	340
CR	II	3350.61	3349.65	3	14.	340	CR	II	3406.10	3405.13	2	.	340
CR	II	3353.52	3352.56	3	.	340	CR	II	3409.73	3408.76	150	3.	340
CR	II	3354.08	3353.12	20	4.	340	CR	II	3411.50	3410.53	3	.	340
CR	II	3356.85	3355.89	2	.	340	CR	II	3416.42	3415.44	2	100.	340
CR	II	3358.35	3357.39	40	79.	340	CR	II	3422.17	3421.19	75	3.	340
CR	II	3358.68	3357.72	1	91.	340	CR	II	3422.60	3421.62	5	60.	340
CR	II	3359.45	3358.49	75	4.	340	CR	II	3423.69	3422.73	125	3.	340
CR	II	3361.26	3360.30	100	21.	340	CR	II	3427.11	3426.14	8	111.	340
CR	II	3362.73	3361.77	30	21.	340	CR	II	3429.92	3428.94	7	99.	340
CR	II	3364.66	3363.70	12	3.	340	CR	II	3430.88	3429.90	1	.	340
CR	II	3365.63	3364.67	7	.	340	CR	II	3431.40	3430.42	3	67.	340
CR	II	3368.38	3367.42	12	79.	340	CR	II	3434.27	3433.29	75	3.	340
CR	II	3369.00	3368.04	150	4.	340	CR	II	3438.91	3437.93	2	111.	340
CR	II	3369.68	3368.72	10	91.	340	CR	II	3439.44	3438.46	1	110.	340
CR	II	3370.01	3369.05	18	68.	340	CR	II	3443.96	3442.98	1	60.	340
CR	II	3373.09	3372.12	15	91.	340	CR	II	3445.32	3444.34	4	111.	340
CR	II	3374.05	3373.08	3		340	CR	II	3446.02	3445.04	5	110.	340
CR	II	3375.92	3374.95	4	4.	340	CR	II	3450.26	3449.28	1	111.	340
CR	II	3375.96	3374.99	3	149.	340	CR	II	3451.83	3450.84	3	60.	340
CR	II	3377.23	3376.26	10	78.	340	CR	II	3455.96	3454.97	35	136.	340
CR	II	3377.59	3376.62	4	.	340	CR	II	3458.60	3457.61	30	135.	340
CR	II	3377.66	3376.71	5	112.	340	CR	II	3460.27	3459.28	25	136.	340
CR	II	3378.33	3377.36	5	149.	340	CR	II	3461.02	3460.03	1	60.	340
CR	II	3378.57	3377.60	1	.	340	CR	II	3462.27	3461.28	3	148.	340
CR	II	3379.33	3378.36	30	21.	340	CR	II	3463.70	3462.71	6	2.	340
CR	II	3380.36	3379.39	25	21.	340	CR	II	3465.00	3464.01	4	2.	340
CR	II	3380.81	3379.84	50	21.	340	CR	II	3467.24	3466.25	2	148.	340
CR	II	3383.65	3382.68	50	3.	340	CR	II	3473.05	3472.06	25	135.	340
CR	II	3388.69	3387.72	5	90.	340	CR	II	3476.11	3475.12	20	2.	340
CR	II	3388.92	3387.95	3	112.	340	CR	II	3479.14	3478.15	3	109.	340
CR	II	3390.04	3389.07	2	.	340	CR	II	3483.57	3482.58	12	67.	340
CR	II	3392.39	3391.41	35	3.	340	CR	II	3485.13	3484.14	20	2.	340

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2015.340	2014.691	300	53.	893
CR	III	2016.08	2015.43	3		490
CR	III	2016.97	2016.32	3		490
CR	III	2017.31	2016.66	2		490
CR	III	2017.59	2016.94	2		490
CR	III	2017.74	2017.09	3		490
CR	III	2018.19	2017.54	1		490
CR	III	2018.48	2017.83	2		490
CR	III	2019.217	2018.566	4		893
CR	III	2019.78	2019.13	1		490

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2020.21	2019.56	1	490		CR	III	2037.667	2037.014	10		893
CR	III	2020.82	2019.97	0	490		CR	III	2037.813	2037.160	60	69.	893
CR	III	2020.99	2020.34	2	490		CR	III	2037.94	2037.29	6		490
CR	III	2021.37	2020.72	6	490		CR	III	2038.27	2037.62	0		490
CR	III	2022.232	2021.580	60	893		CR	III	2039.13	2038.48	0		490
CR	III	2022.43	2021.78	2	490		CR	III	2039.35	2038.70	3		490
CR	III	2022.60	2021.95	2	490		CR	III	2039.53	2038.88	1		490
CR	III	2023.97	2023.32	4	490		CR	III	2039.73	2039.08	2		490
CR	III	2024.16	2023.51	4	490		CR	III	2039.83	2039.18	1		490
CR	III	2024.68	2024.03	3	490		CR	III	2040.086	2039.432	25		893
CR	III	2024.88	2024.23	1	490		CR	III	2040.318	2039.664	350	69.	893
CR	III	2025.10	2024.45	2	490		CR	III	2041.09	2040.44	2		490
CR	III	2026.177	2025.526	90	893		CR	III	2042.376	2041.722	90	69.	893
CR	III	2026.41	2025.76	5	490		CR	III	2042.912	2042.258	90		893
CR	III	2027.10	2026.45	1	490		CR	III	2043.27	2042.62	8		490
CR	III	2028.991	2028.339	10	893		CR	III	2043.48	2042.83	2		490
CR	III	2029.35	2028.70	3	490		CR	III	2043.87	2043.22	5		490
CR	III	2029.54	2028.89	3	490		CR	III	2045.47	2044.81	1		490
CR	III	2029.77	2029.12	1	490		CR	III	2046.22	2045.56	1		490
CR	III	2030.54	2029.89	1	490		CR	III	2046.57	2045.91	4		490
CR	III	2030.82	2030.17	1	490		CR	III	2047.03	2046.37	4		490
CR	III	2031.263	2030.610	120	893		CR	III	2047.680	2047.024	1		893
CR	III	2031.413	2030.760	250	893		CR	III	2047.922	2047.266	350	69.	893
CR	III	2031.50	2030.85	20	490		CR	III	2049.08	2048.42	10		490
CR	III	2031.93	2031.28	1	490		CR	III	2049.99	2049.33	1		490
CR	III	2032.29	2031.64	1	490		CR	III	2050.24	2049.58	1		490
CR	III	2032.58	2031.93	3	490		CR	III	2051.00	2050.34	5		490
CR	III	2032.82	2032.17	5	490		CR	III	2051.70	2051.04	3		490
CR	III	2033.01	2032.38	1	490		CR	III	2052.01	2051.35	2		490
CR	III	2033.13	2032.48	1	490		CR	III	2052.16	2051.50	2		490
CR	III	2033.27	2032.62	1	490		CR	III	2053.586	2052.930	1		893
CR	III	2033.59	2032.94	1	490		CR	III	2054.01	2053.35	0		490
CR	III	2033.93	2033.28	1	490		CR	III	2054.20	2053.54	4		490
CR	III	2034.24	2033.59	20	490		CR	III	2054.64	2053.98	1		490
CR	III	2034.851	2034.197	25	893		CR	III	2054.97	2054.31	4		490
CR	III	2035.476	2034.822	300	893		CR	III	2055.15	2054.49	2		490
CR	III	2036.049	2035.492	120	893		CR	III	2055.736	2055.079	120		893
CR	III	2036.26	2035.61	10	490		CR	III	2057.13	2056.47	2		490
CR	III	2036.66	2036.01	1	490		CR	III	2058.12	2057.46	4		490
CR	III	2037.070	2036.416	350	69.	893	CR	III	2058.33	2057.67	1		490

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	III	2058.51	2057.85	1		490	CR	III	2076.166	2075.505	250		893
CR	III	2058.91	2058.25	4		490	CR	III	2076.338	2075.677	300		893
CR	III	2059.190	2058.532	4		893	CR	III	2077.699	2077.037	120		893
CR	III	2059.77	2059.11	1		490	CR	III	2078.22	2077.56	0		490
CR	III	2059.95	2059.29	1		490	CR	III	2078.45	2077.79	1		490
CR	III	2060.19	2059.53	4		490	CR	III	2078.81	2078.15	0		490
CR	III	2060.39	2059.73	3		490	CR	III	2079.073	2078.411	250		893
CR	III	2060.880	2060.222	4		893	CR	III	2079.982	2079.320	120		893
CR	III	2061.222	2060.564	200		893	CR	III	2080.917	2080.254	10		893
CR	III	2061.54	2060.88	2		490	CR	III	2081.45	2080.79	2		490
CR	III	2061.73	2061.07	10		490	CR	III	2081.96	2081.30	1		490
CR	III	2064.11	2063.45	1		490	CR	III	2082.47	2081.81	1		490
CR	III	2064.30	2063.64	1		490	CR	III	2082.679	2082.018	350		893
CR	III	2064.46	2063.80	4		490	CR	III	2082.88	2082.22	1		490
CR	III	2065.33	2064.67	2		490	CR	III	2083.13	2082.47	1		490
CR	III	2065.776	2065.116	90	38.	893	CR	III	2083.72	2083.06	1		490
CR	III	2065.90	2065.24	3		490	CR	III	2084.47	2083.81	11		490
CR	III	2066.58	2065.92	5		490	CR	III	2084.87	2084.21	3		490
CR	III	2066.84	2066.18	15	38.	490	CR	III	2085.59	2084.93	2		490
CR	III	2067.11	2066.45	4		490	CR	III	2085.76	2085.10	2		490
CR	III	2067.35	2066.69	20		490	CR	III	2086.16	2085.50	1		490
CR	III	2067.64	2066.98	5		490	CR	III	2086.496	2085.834	60		893
CR	III	2067.98	2067.32	5		490	CR	III	2088.24	2087.58	1		490
CR	III	2068.22	2067.56	2		490	CR	III	2088.794	2088.131	150		893
CR	III	2068.54	2067.88	1		490	CR	III	2089.824	2089.161	1		893
CR	III	2069.28	2068.62	1		490	CR	III	2091.436	2090.772	90		893
CR	III	2069.45	2068.79	1		490	CR	III	2091.63	2090.97	4		490
CR	III	2069.668	2069.009	300		893	CR	III	2091.87	2091.21	1		490
CR	III	2070.126	2069.467	1		893	CR	III	2092.22	2091.56	1		490
CR	III	2070.27	2069.61	1		490	CR	III	2092.41	2091.75	0		490
CR	III	2071.56	2070.90	10		490	CR	III	2092.68	2092.02	5		490
CR	III	2071.84	2071.18	15		490	CR	III	2093.00	2092.34	1		490
CR	III	2072.91	2072.25	1		490	CR	III	2093.24	2092.58	1		490
CR	III	2073.13	2072.47	1		490	CR	III	2093.43	2092.77	3		490
CR	III	2073.29	2072.63	2		490	CR	III	2093.64	2092.98	1		490
CR	III	2073.60	2072.94	3		490	CR	III	2094.31	2093.65	4		490
CR	III	2074.02	2073.36	15	38.	490	CR	III	2094.534	2093.869	500		893
CR	III	2074.75	2074.09	0		490	CR	III	2095.13	2094.46	1		490
CR	III	2074.91	2074.25	0		490	CR	III	2095.59	2094.92	3		490
CR	III	2075.87	2075.21	2		490	CR	III	2096.02	2095.35	1		490

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2096.60	2095.94	1	490		CR	III	2112.51	2111.84	1	490	
CR	III	2097.392	2096.726	120	893	38.	CR	III	2112.83	2112.16	5	490	
CR	III	2098.00	2097.34	3	490		CR	III	2113.10	2112.43	1	490	
CR	III	2098.42	2097.76	1	490		CR	III	2113.41	2112.74	2	490	
CR	III	2098.73	2098.07	1	490		CR	III	2113.68	2113.01	3	490	
CR	III	2099.389	2098.725	60	893		CR	III	2113.96	2113.29	3	490	
CR	III	2099.69	2099.03	2	490		CR	III	2114.216	2113.547	250	893	
CR	III	2099.79	2099.13	2	490		CR	III	2114.483	2113.814	570	41.	893
CR	III	2100.510	2099.845	150	893		CR	III	2114.973	2114.306	300	40.	893
CR	III	2101.149	2100.484	500	893		CR	III	2115.240	2114.573	300	61.	893
CR	III	2101.30	2100.63	5	490		CR	III	2115.570	2114.902	400	41.	893
CR	III	2101.480	2100.815	200	893		CR	III	2116.06	2115.39	3	490	
CR	III	2102.04	2101.37	1	490		CR	III	2116.26	2115.59	3	490	
CR	III	2102.380	2101.715	60	893		CR	III	2116.58	2115.91	4	490	
CR	III	2102.81	2102.14	5	490		CR	III	2116.79	2116.12	3	490	
CR	III	2103.274	2102.700	10	893		CR	III	2117.07	2116.40	2	490	
CR	III	2103.65	2102.98	5	490		CR	III	2117.36	2116.69	2	490	
CR	III	2103.887	2103.221	350	893	41.	CR	III	2117.613	2116.945	120	893	
CR	III	2103.99	2103.32	20	490	41.	CR	III	2118.218	2117.550	570	41.	893
CR	III	2104.012	2103.346	350	893	41.	CR	III	2118.578	2117.909	300	40.	893
CR	III	2104.39	2103.72	1	490		CR	III	2118.880	2118.211	250		893
CR	III	2104.89	2104.22	3	490		CR	III	2119.371	2118.702	200	61.	893
CR	III	2105.350	2104.684	4	893		CR	III	2119.881	2119.212	25	893	
CR	III	2105.567	2104.901	300	893	41.	CR	III	2120.306	2119.637	200	893	
CR	III	2106.253	2105.586	300	893		CR	III	2121.061	2120.392	250	40.	893
CR	III	2106.53	2105.86	1	490		CR	III	2121.35	2120.68	1	490	
CR	III	2106.89	2106.22	2	490		CR	III	2122.03	2121.36	10	490	
CR	III	2107.494	2106.827	250	893		CR	III	2122.382	2121.712	300	893	
CR	III	2107.850	2107.183	150	893	61.	CR	III	2122.81	2122.14	1	490	
CR	III	2108.391	2107.724	250	893	40.	CR	III	2123.151	2122.481	300	61.	893
CR	III	2108.80	2108.13	1	490		CR	III	2123.452	2122.782	200	40.	893
CR	III	2108.99	2108.32	1	490		CR	III	2123.797	2123.127	200	40.	893
CR	III	2109.77	2109.10	1	490		CR	III	2124.224	2123.554	400	893	
CR	III	2110.158	2109.490	350	893		CR	III	2124.74	2124.07	1	490	
CR	III	2110.25	2109.58	2	490		CR	III	2125.388	2124.717	300	893	
CR	III	2110.53	2109.86	6	490		CR	III	2126.307	2125.636	120	41.	893
CR	III	2110.73	2110.06	4	490		CR	III	2127.186	2126.515	90	893	
CR	III	2111.03	2110.36	4	490		CR	III	2127.343	2126.672	25	40.	893
CR	III	2111.33	2110.66	5	490		CR	III	2127.657	2126.982	150	893	
CR	III	2111.92	2111.25	4	490		CR	III	2128.41	2127.74	2	490	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2128.60	2127.93	10	490		CR	III	2146.707	2146.032	10		893
CR	III	2128.80	2128.13	10	490		CR	III	2146.91	2146.23	3		490
CR	III	2129.08	2128.41	2	490		CR	III	2147.090	2146.414	250	52.	893
CR	III	2129.36	2128.69	1	490		CR	III	2147.42	2146.74	3		490
CR	III	2129.90	2129.23	5	41.	490	CR	III	2147.895	2147.219	350	41.	893
CR	III	2129.945	2129.273	60	41.	893	CR	III	2148.293	2147.617	350	48.	893
CR	III	2130.09	2129.42	2	490		CR	III	2148.523	2147.847	300		893
CR	III	2130.277	2129.605	300	893		CR	III	2149.10	2148.42	2		490
CR	III	2131.77	2131.10	5	490		CR	III	2149.375	2148.699	300	48.	893
CR	III	2131.98	2131.31	5	490		CR	III	2149.573	2148.897	250	41.	893
CR	III	2132.474	2131.803	150	41.	893	CR	III	2150.196	2149.522	300	52.	893
CR	III	2132.666	2131.995	300	893		CR	III	2150.43	2149.76	1		490
CR	III	2132.885	2132.214	40.	40.	893	CR	III	2151.046	2150.372	10		893
CR	III	2134.486	2133.814	120	893		CR	III	2152.18	2151.50	2		490
CR	III	2134.865	2134.193	200	61.	893	CR	III	2152.33	2151.65	2		490
CR	III	2135.76	2135.05	7	490		CR	III	2152.59	2151.91	2		490
CR	III	2137.30	2136.63	1	490		CR	III	2153.460	2152.785	400	52.	893
CR	III	2137.622	2136.949	400	893		CR	III	2153.854	2153.178	150		893
CR	III	2138.16	2137.49	2	490		CR	III	2154.599	2153.923	250		893
CR	III	2138.40	2137.73	3	490		CR	III	2154.697	2154.021	200		893
CR	III	2138.671	2137.998	150	41.	893	CR	III	2155.01	2154.33	2		490
CR	III	2139.08	2138.41	3	490		CR	III	2155.336	2154.660	300	48.	893
CR	III	2139.813	2139.140	400	48.	893	CR	III	2155.62	2154.94	4		490
CR	III	2140.57	2139.90	3	490		CR	III	2157.868	2157.191	350		893
CR	III	2141.861	2141.187	500	40.	893	CR	III	2158.82	2158.14	2		490
CR	III	2142.423	2141.749	150	893		CR	III	2159.789	2159.112	300	48.	893
CR	III	2142.737	2142.063	40	893		CR	III	2160.431	2159.753	90		893
CR	III	2143.310	2142.636	150	41.	893	CR	III	2161.40	2160.72	3		490
CR	III	2143.60	2142.93	1	490		CR	III	2161.685	2161.007	150		893
CR	III	2143.76	2143.09	1	490		CR	III	2162.634	2161.956	60		893
CR	III	2144.00	2143.33	2	490		CR	III	2163.12	2162.44	2		490
CR	III	2144.241	2143.566	4	893		CR	III	2164.47	2163.79	12		490
CR	III	2144.469	2143.794	10	893		CR	III	2164.554	2163.975	400		893
CR	III	2144.864	2144.189	500	40.	893	CR	III	2165.16	2164.48	1		490
CR	III	2145.09	2144.42	0	490		CR	III	2165.350	2164.671	90		893
CR	III	2145.50	2144.82	1	490		CR	III	2165.98	2165.30	2		490
CR	III	2145.73	2145.05	1	490		CR	III	2166.947	2166.267	350	52.	893
CR	III	2145.87	2145.19	1	490		CR	III	2168.50	2167.82	5		490
CR	III	2146.11	2145.43	7	490		CR	III	2168.936	2168.258	200		893
CR	III	2146.334	2145.659	200	893		CR	III	2170.19	2169.51	4		490

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2170.34	2169.66	5		490	CR	III	2194.19	2193.51	1		490
CR	III	2171.377	2170.698	400	68	893	CR	III	2194.89	2194.21	2		490
CR	III	2172.50	2171.82	4		490	CR	III	2195.11	2194.43	2		490
CR	III	2172.81	2172.13	1		490	CR	III	2195.343	2194.659	200		893
CR	III	2173.25	2172.57	4	48.	490	CR	III	2195.82	2195.13	5		490
CR	III	2173.59	2172.91	10		490	CR	III	2196.68	2196.00	2		490
CR	III	2174.94	2174.26	5		490	CR	III	2198.04	2197.35	1		490
CR	III	2175.63	2174.95	1		490	CR	III	2198.583	2197.898	500	51.	893
CR	III	2175.74	2175.06	5		490	CR	III	2199.317	2198.631	570	68.	893
CR	III	2176.10	2175.42	1		490	CR	III	2200.83	2200.14	4		490
CR	III	2177.364	2176.683	150		893	CR	III	2201.692	2201.006	250	51.	893
CR	III	2178.14	2177.46	0		490	CR	III	2201.883	2201.197	350	47.	893
CR	III	2179.16	2178.48	3		490	CR	III	2202.142	2201.455	250	60.	893
CR	III	2179.32	2178.640	150		893	CR	III	2202.15	2201.46	15	68.	490
CR	III	2181.3	2180.67	3		490	CR	III	2202.636	2201.949	350	58.	893
CR	III	2182.123	2181.441	120	51.	893	CR	III	2203.050	2202.363	40		893
CR	III	2182.489	2181.807	300		893	CR	III	2203.909	2203.222	400	47.	893
CR	III	2182.73	2182.05	15		490	CR	III	2204.431	2203.744	200		893
CR	III	2183.366	2182.683	250		893	CR	III	2205.268	2204.580	250	51.	893
CR	III	2183.483	2182.800	350		893	CR	III	2208.136	2207.448	150	47.	893
CR	III	2183.749	2183.066	90		893	CR	III	2209.390	2208.703	400	58.	893
CR	III	2184.427	2183.744	350	60.	893	CR	III	2211.61	2210.92	1		490
CR	III	2185.716	2185.033	500	68.	893	CR	III	2211.911	2211.224	300		893
CR	III	2186.43	2185.75	1		490	CR	III	2212.136	2211.448	200	47.	893
CR	III	2186.64	2185.96	1		490	CR	III	2215.918	2215.229	150		893
CR	III	2186.89	2186.21	0		490	CR	III	2216.538	2215.849	300	58.	893
CR	III	2187.07	2186.39	3		490	CR	III	2216.922	2216.233	120		893
CR	III	2187.55	2186.87	1		490	CR	III	2217.547	2216.858	120		893
CR	III	2187.80	2187.22	3		490	CR	III	2218.208	2217.519	570		893
CR	III	2188.40	2187.72	3		490	CR	III	2218.443	2217.754	300	47.	893
CR	III	2188.630	2187.948	250		893	CR	III	2218.836	2218.146	90	60.	893
CR	III	2188.79	2188.11	3		490	CR	III	2219.380	2218.690	350		893
CR	III	2189.27	2188.59	1		490	CR	III	2220.276	2219.586	300	47.	893
CR	III	2189.91	2189.23	3		490	CR	III	2222.665	2221.974	60		893
CR	III	2190.09	2189.41	3		490	CR	III	2225.446	2224.754	200	58.	893
CR	III	2190.489	2189.806	200		893	CR	III	2227.368	2226.676	1000	39.	893
CR	III	2190.781	2190.098	250	60.	893	CR	III	2227.706	2227.014	150	58.	893
CR	III	2191.451	2190.768	350	51.	893	CR	III	2229.445	2228.754	350		893
CR	III	2191.950	2191.267	200	47.	893	CR	III	2230.321	2229.630	200		893
CR	III	2192.281	2191.598	300	51.	892	CR	III	2231.277	2230.586	150		893

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CR	III	2232.480	2231.788	500		893	CR	III	2274.043	2273.341	570		893
CR	III	2234.274	2233.582	40		893	CR	III	2274.477	2273.777	120	39.	893
CR	III	2234.478	2233.786	700	45.	893	CR	III	2275.927	2275.226	250	39.	893
CR	III	2235.287	2234.594	120		893	CR	III	2276.179	2275.478	350	67.	893
CR	III	2235.681	2234.988	10		893	CR	III	2277.116	2276.415	500	50.	893
CR	III	2236.605	2235.912	800	39.	893	CR	III	2278.167	2277.465	400	67.	893
CR	III	2237.122	2236.429	40		893	CR	III	2280.022	2279.320	90		893
CR	III	2238.265	2237.571	650	45.	893	CR	III	2281.310	2280.607	150	67.	893
CR	III	2240.154	2239.460	250		893	CR	III	2282.569	2281.866	60		893
CR	III	2242.010	2241.315	120		893	CR	III	2283.074	2282.371	150	67.	893
CR	III	2243.587	2242.892	60		893	CR	III	2285.170	2284.466	700		893
CR	III	2244.805	2244.109	700	39.	893	CR	III	2286.466	2285.762	25		893
CR	III	2245.463	2244.767	200		893	CR	III	2286.56	2285.88			893
CR	III	2248.380	2247.683	500		893	CR	III	2287.287	2286.583	400	50.	893
CR	III	2249.647	2248.950	250	45.	893	CR	III	2287.880	2287.175	300		893
CR	III	2251.042	2250.345	10		893	CR	III	2289.953	2289.248	500		893
CR	III	2251.746	2251.050	200		893	CR	III	2291.368	2290.662	570	50.	893
CR	III	2251.848	2251.152	250		893	CR	III	2291.794	2291.088	10		893
CR	III	2252.161	2251.465	570	39.	893	CR	III	2293.230	2292.524	150		893
CR	III	2252.671	2251.975	400	39.	893	CR	III	2294.838	2294.131	150		893
CR	III	2253.710	2253.014	60		893	CR	III	2296.016	2295.309	90		893
CR	III	2253.989	2253.293	40		893	CR	III	2296.267	2295.560	570	62.	893
CR	III	2254.958	2254.261	4		893	CR	III	2297.87	2297.16	1		490
CR	III	2256.175	2255.478	300	45.	893	CR	III	2298.012	2297.304	40		893
CR	III	2257.351	2256.654	570		893	CR	III	2298.622	2297.916	350	50.	893
CR	III	2258.086	2257.388	500	39.	893	CR	III	2299.57	2298.87	1		490
CR	III	2258.253	2257.555	650	50.	893	CR	III	2300.209	2299.503	200		893
CR	III	2258.679	2257.981	350	39.	893	CR	III	2301.210	2300.504	650	55.	893
CR	III	2258.883	2258.185	150		893	CR	III	2303.490	2302.783	120		893
CR	III	2259.314	2258.616	500		893	CR	III	2304.500	2303.793	1		893
CR	III	2259.702	2259.004	150		893	CR	III	2310.744	2310.035	500		893
CR	III	2260.88	2260.18	3		490	CR	III	2315.343	2314.632	800	44.	893
CR	III	2261.844	2261.145	90		893	CR	III	2316.84	2316.13	3		490
CR	III	2262.385	2261.686	400	39.	893	CR	III	2318.160	2317.448	90		893
CR	III	2263.352	2262.653	350	45.	893	CR	III	2319.777	2319.065	700	44.	893
CR	III	2265.619	2264.919	350	39.	893	CR	III	2320.97	2320.26			893
CR	III	2267.213	2266.513	60	67.	893	CR	III	2322.116	2321.403	10		893
CR	III	2268.617	2267.916	120		893	CR	III	2325.602	2324.890	800	44.	893
CR	III	2273.063	2272.361	60	67.	893	CR	III	2328.455	2327.742	250		893
CR	III	2273.493	2272.791	120		893	CR	III	2330.016	2329.303	150		893

F P

F P

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	111	2330.969	2330.256	120		893	CR	111	2461.57	2460.83		893	F P
CR	111	2331.406	2330.693	90		893	CR	111	2469.572	2468.828	4		893
CR	111	2332.076	2331.362	60		893	CR	111	2473.614	2472.869	500	43.	893
CR	111	2333.801	2333.087	350	44.	893	CR	111	2475.652	2474.906	150		893
CR	111	2336.051	2335.336	250		893	CR	111	2477.287	2476.541	60		893
CR	111	2337.212	2336.497	90		893	CR	111	2480.054	2479.307	10		893
CR	111	2341.202	2340.486	500		893	CR	111	2480.561	2479.814	650	43.	893
CR	111	2341.34	2340.62			893	CR	111	2482.302	2481.554	60		893
CR	111	2343.174	2342.457	300	44.	893	CR	111	2483.821	2483.073	700	43.	893
CR	111	2346.426	2345.708	90		893	CR	111	2487.795	2487.046	350		893
CR	111	2348.729	2348.010	150		893	CR	111	2489.01	2488.26	60	66.	490
CR	111	2352.384	2351.666	60		893	CR	111	2492.559	2491.808	1	66.	893
CR	111	2353.416	2352.698	200		893	CR	111	2496.698	2495.946	1		893
CR	111	2356.044	2355.325	250		893	CR	111	2498.884	2498.131	1		893
CR	111	2365.410	2364.688	150		893	CR	111	2500.826	2500.073	90	66.	893
CR	111	2369.163	2368.440	10		893	CR	111	2501.03	2500.27	40	66.	490
CR	111	2369.823	2369.100	120	54.	893	CR	111	2501.265	2500.511	1		893
CR	111	2371.112	2370.389	90		893	CR	111	2501.927	2501.173	200	57.	893
CR	111	2373.200	2372.476	90		893	CR	111	2505.819	2505.066	120	66.	893
CR	111	2374.901	2374.176	40		893	CR	111	2507.167	2506.414	400		893
CR	111	2377.882	2377.159	60		893	CR	111	2513.263	2512.508	350	57.	893
CR	111	2379.030	2378.306	90		893	CR	111	2516.680	2515.924	250		893
CR	111	2380.639	2379.915	120		893	CR	111	2517.565	2516.809	200	42.	893
CR	111	2381.794	2381.070	250		893	CR	111	2519.014	2518.257	300		893
CR	111	2392.795	2392.067	300		893	CR	111	2520.407	2519.650	200	57.	893
CR	111	2397.142	2396.413	200		893	CR	111	2531.779	2531.019	500		893
CR	111	2400.253	2399.523	60		893	CR	111	2538.513	2537.751	500		893
CR	111	2400.866	2400.136	120		893	CR	111	2539.369	2538.605	250		893
CR	111	2404.773	2404.042	650		893	CR	111	2545.126	2544.364	400	42.	893
CR	111	2414.369	2413.637	200	59.	893	CR	111	2545.951	2545.189	400		893
CR	111	2421.274	2420.540	150		893	CR	111	2546.898	2546.136	200		893
CR	111	2425.34	2424.60	1		490	CR	111	2549.361	2548.598	250		893
CR	111	2430.497	2429.760	200		893	CR	111	2551.604	2550.840	300	57.	893
CR	111	2434.479	2433.741	4	59.	893	CR	111	2556.722	2555.957	60	57.	893
CR	111	2436.069	2435.330	250	59.	893	CR	111	2556.858	2556.093	1		893
CR	111	2437.084	2436.345	25	43.	893	CR	111	2558.628	2557.862	250	57.	893
CR	111	2451.599	2450.858	1		893	CR	111	2562.35	2561.59	10		490
CR	111	2455.919	2455.177	200		893	CR	111	2565.541	2564.773	500		893
CR	111	2457.560	2456.817	350	43.	893	CR	111	2569.649	2568.880	200		893
CR	111	2459.707	2458.964	250	43.	893	CR	111	2578.506	2577.737	400	57.	893

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	2578.73	2577.96	40		490	CR	III	2902.10	2901.25	20		490
CR	III	2579.340	2578.570	10	65.	893	CR	III	2902.40	2901.55	20		490
CR	III	2585.309	2584.538	570	57.	893	CR	III	2907.19	2906.34	20		490
CR	III	2585.716	2584.944	90		893	CR	III	2909.68	2908.83	20		490
CR	III	2588.840	2588.067	300		893	CR	III	2917.43	2916.57	40		490
CR	III	2592.543	2591.769	300		893	CR	III	2917.87	2917.02	3		490
CR	III	2594.711	2593.937	200		893	CR	III	2945.31	2944.45	20		490
CR	III	2596.087	2595.312	120		893	CR	III	2945.49	2944.63	2		490
CR	III	2598.959	2598.183	10		893	CR	III	2964.93	2964.06	5		490
CR	III	2599.493	2598.717	1		893	CR	III	2966.21	2965.34	10		490
CR	III	2603.58	2602.81	10		490	CR	III	2975.20	2974.33			893
CR	III	2604.79	2604.01			893	CR	III	3009.11	3008.26	2		490
CR	III	2605.66J	2604.882	200		893	CR	III	3085.01	3084.12	1		490
CR	III	2606.08	2605.30	10		490	CR	III	3089.12	3088.22			893
CR	III	2612.983	2612.203	4		893	CR	III	3093.18	3092.28	2		490
CR	III	2613.170	2612.390	10	65.	893	CR	III	3155.72	3154.81	5		490
CR	III	2614.534	2613.754	150		893	CR	III	3171.43	3170.52	5		490
CR	III	2617.291	2616.512	400	65.	893	CR	III	3171.61	3170.70	20		490
CR	III	2619.963	2619.184	10		893	CR	III	3173.26	3172.35	2		490
CR	III	2626.416	2625.635	25	65.	893	CR	III	3177.28	3176.36	5		490
CR	III	2626.853	2626.072	570		893	CR	III	3199.23	3198.31			893
CR	III	2634.495	2633.711	1		893	CR	III	3206.64	3205.72			893
CR	III	2639.667	2638.882	4		893	CR	III	3221.73	3220.81	1		490
CR	III	2641.515	2640.729	350		893	CR	III	3223.97	3223.04	1		490
CR	III	2645.744	2644.957	10	65.	893	CR	III	3225.22	3224.30	1		490
CR	III	2648.29	2647.50	50		490	CR	III	3230.11	3229.18	5		490
CR	III	2651.370	2650.581	10		893	CR	III	3233.39	3232.46	100		490
CR	III	2654.067	2653.278	4		893	CR	III	3234.32	3233.39	40		490
CR	III	2656.054	2655.264	200		893	CR	III	3240.47	3239.54	10		490
CR	III	2658.813	2658.022	1		893	CR	III	3249.10	3248.16	20		490
CR	III	2661.31	2660.52	30		490	CR	III	3257.01	3256.08	20		490
CR	III	2663.704	2662.914	10		893	CR	III	3257.53	3256.60	5		490
CR	III	2675.362	2674.569	25		893	CR	III	3273.10	3272.16	1		490
CR	III	2731.87	2731.07	20		490	CR	III	3274.94	3274.00	1		490
CR	III	2771.12	2770.30	10		490	CR	III	3275.10	3274.16	1		490
CR	III	2805.91	2805.10	5		490	CR	III	3276.97	3276.02	30		490
CR	III	2806.25	2805.42	1		490	CR	III	3278.46	3277.42	50		490
CR	III	2807.22	2806.40	10		490	CR	III	3282.61	3281.66	20		490
CR	III	2808.00	2807.18	5		490	CR	III	3284.35	3283.41	5		490
CR	III	2885.59	2884.74	5		490	CR	III	3284.70	3283.76	5		490

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CR	III	3285.65	3284.70	2		490		CR	XI	2632.1	2631.3			726	F
CR	III	3286.06	3285.12	10		490		CR	XI	3178.7	3177.8			726	F
CR	III	3286.87	3285.92	30		490									
CR	III	3287.82	3286.88	5		490		CU	I	2024.990	2024.335	140	5.	672	
CR	III	3288.31	3287.36	10		490		CU	I	2046.29	2045.62	5		672	
								CU	I	2068.984	2068.321	5		672	
CR	III	3297.78	3296.84	20		490		CU	I	2080.192	2079.529	20	26.	672	
CR	III	3298.89	3297.95	20		490		CU	I	2105.782	2105.112	280	23.	672	
CR	III	3299.30	3298.37	1		490									
CR	III	3302.73	3301.79	10		490									
CR	III	3303.11	3302.16	5		490		CU	I	2111.33	2110.66	2		672	
								CU	I	2111.87	2111.20	0		672	
CR	III	3303.84	3302.89	7		490		CU	I	2113.93	2113.26	2		672	
CR	III	3304.31	3303.36	3		490		CU	I	2114.24	2113.57	2		672	
CR	III	3319.87	3318.92	2		490		CU	I	2125.02	2124.35	5		672	
CR	III	3320.42	3319.47	2		490									
CR	III	3320.86	3319.91	2		490		CU	I	2131.436	2130.762	50	21.	672	
								CU	I	2134.54	2133.87	0		672	
CR	III	3328.19	3327.23	1		490		CU	I	2139.209	2138.533	220	24.	672	
CR	III	3351.59	3350.63	10		490		CU	I	2141.05	2140.37	1	25.	672	
CR	III	3393.53	3392.56	5		490		CU	I	2141.24	2140.56	2	25.	672	
CR	III	3398.36	3397.38	10		490									
CR	III	3414.17	3413.20	5		490		CU	I	2142.09	2141.41	2		672	
								CU	I	2143.39	2142.72	5		672	
CR	III	3414.99	3414.01	20		490		CU	I	2150.08	2149.40	10		672	
CR	III	3417.18	3416.20	20		490		CU	I	2154.99	2154.31	2		672	
CR	III	3427.71	3426.73	20		490		CU	I	2165.775	2165.093	360	4.	672	
CR	III	3430.88	3429.90	2		490									
CR	III	3440.56	3439.58			893	F P	CU	I	2170.245	2169.562	170	26.	672	
								CU	I	2172.500	2171.817	140	26.	672	
CR	III	3441.16	3440.17	20		490		CU	I	2179.629	2178.944	400	3.	672	
CR	III	3444.21	3443.23	15		490		CU	I	2182.405	2181.720	410	3.	672	
CR	III	3451.73	3450.75	5		490		CU	I	2199.249	2198.560	1		672	
CR	III	3475.52	3474.53			893	F P								
CR	III	3477.28	3476.29			893	F P	CU	I	2200.272	2199.583	410	23.	672	
								CU	I	2200.441	2199.752	360	23.	672	
CR	III	3479.59	3478.60	50		490		CU	I	2206.34	2205.65	5		672	
CR	III	3488.32	3487.32	100		490		CU	I	2215.273	2214.581	400	22.	672	
								CU	I	2216.346	2215.654	320	22.	672	
CR	IX	2734.6	2733.8			726	F	CU	I	2226.391	2225.697	460	2.	672	
CR	IX	3302.3	3301.4			726	F	CU	I	2228.469	2227.775	400	21.	672	
								CU	I	2230.779	2230.084	500	21.	672	
CR	X	2534.7	2533.9			726	F	CU	I	2236.974	2236.278	300	24.	672	
CR	X	2695.0	2694.2			726	F								
CR	X	3327.1	3326.1			726	F	CU	I	2238.04	2237.34	5		672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	2239.151	2238.454	330	25.	672	
CU	I	2240.03	2239.33	2		672	
CU	I	2241.10	2240.40	2		672	
CU	I	2244.963	2244.265	480	2.	672	
CU	I	2248.196	2247.503	2		672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	2255.987	2255.286	0		672	
CU	I	2261.229	2260.528	360	20.	672	
CU	I	2263.781	2263.079	460	24.	672	
CU	I	2282.78	2282.07	0		672	
CU	I	2289.54	2288.83	0		672	
CU	I	2294.551	2293.842	500	19.	672	
CU	I	2302.747	2302.036	0		672	
CU	I	2303.826	2303.116	320	23.	672	
CU	I	2320.275	2319.561	220	22.	672	
CU	I	2349.072	2348.352	2		672	
CU	I	2355.546	2354.825	2		672	
CU	I	2363.943	2363.220	5		672	
CU	I	2373.00	2372.28	1		672	
CU	I	2380.09	2379.36	2		672	
CU	I	2393.357	2392.627	500	19.	672	
CU	I	2405.598	2404.864	2	34.	672	
CU	I	2407.398	2406.665	380	19.	672	
CU	I	2415.932	2415.197	5		672	
CU	I	2417.339	2416.605	5	33.	672	
CU	I	2421.343	2420.606	1		672	
CU	I	2422.381	2421.644	1		672	
CU	I	2442.378	2441.637	320	1.	672	
CU	I	2458.48	2457.74	5		672	
CU	I	2459.64	2458.88	5		672	
CU	I	2461.67	2460.93	5		672	
CU	I	2471.58	2470.83	0		672	
CU	I	2473.07	2472.32	0		672	
CU	I	2475.566	2474.818	5		672	
CU	I	2480.313	2479.594	1		672	
CU	I	2480.503	2479.754	10	34.	672	
CU	I	2492.898	2492.146	450	1.	672	
CU	I	2495.65	2494.99	10	33.	672	
CU	I	2534.79	2534.03	2		672	
CU	I	2536.79	2536.03	2		672	
CU	I	2537.43	2536.67	2		672	
CU	I	2537.62	2536.86	2		672	
CU	I	2541.14	2540.38	5		672	
CU	I	2547.53	2546.77	0		672	
CU	I	2548.24	2547.48	10	44.	672	
CU	I	2553.32	2552.56	1		672	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	2554.06	2553.29	2		672	CU	I	2672.85	2672.05	5		672
CU	I	2563.935	2563.167	10	43.	672	CU	I	2677.222	2676.428	20	53.	672
CU	I	2564.321	2563.553	3		672	CU	I	2678.488	2677.794	2		672
CU	I	2564.723	2563.955	3		672	CU	I	2679.99	2679.19	0		672
CU	I	2568.099	2567.330	2		672	CU	I	2681.81	2681.02	2		672
CU	I	2570.658	2569.888	10	43.	672	CU	I	2687.54	2686.74	1		672
CU	I	2571.569	2570.800	10	42.	672	CU	I	2688.47	2687.68	1		672
CU	I	2577.89	2577.12	2		672	CU	I	2694.878	2694.080	5		672
CU	I	2580.06	2579.29	20	54.	672	CU	I	2703.45	2702.65	1	47.	672
CU	I	2581.34	2580.57	5		672	CU	I	2704.89	2704.09	1		672
CU	I	2594.44	2593.65	2		672	CU	I	2705.98	2705.18	2		672
CU	I	2595.91	2595.14	0		672	CU	I	2708.30	2707.50	0		672
CU	I	2605.45	2604.67	1		672	CU	I	2712.56	2711.75	0		672
CU	I	2605.62	2604.84	1		672	CU	I	2714.80	2714.00	2		672
CU	I	2606.04	2605.26	3		672	CU	I	2715.34	2714.54	2		672
CU	I	2610.09	2609.31	0		672	CU	I	2716.15	2715.35	5	52.	672
CU	I	2612.06	2611.30	0		672	CU	I	2716.346	2715.543	20	52.	672
CU	I	2619.146	2618.366	500	18.	672	CU	I	2719.651	2718.847	2		672
CU	I	2623.657	2622.875	5		672	CU	I	2719.901	2719.097	15	52.	672
CU	I	2627.461	2626.678	10	42.	672	CU	I	2721.003	2720.199	15	49.	672
CU	I	2628.148	2627.365	20	42.	672	CU	I	2721.44	2720.62	2	47.	672
CU	I	2629.643	2628.860	1		672	CU	I	2722.24	2721.44	1		672
CU	I	2630.788	2630.004	20	41.	672	CU	I	2722.56	2721.75	1		672
CU	I	2635.718	2634.933	30	40.	672	CU	I	2723.507	2722.702	5		672
CU	I	2636.525	2635.614	1		672	CU	I	2724.759	2723.953	30	49.	672
CU	I	2642.336	2641.550	5		672	CU	I	2725.548	2724.742	1		672
CU	I	2644.620	2643.834	1		672	CU	I	2735.666	2734.858	10	39.	672
CU	I	2646.090	2645.303	20	42.	672	CU	I	2738.417	2737.608	2	39.	672
CU	I	2646.981	2646.194	1		672	CU	I	2745.16	2744.35	1		672
CU	I	2650.628	2649.840	30	41.	672	CU	I	2746.263	2745.452	20	64.	672
CU	I	2652.229	2651.440	1		672	CU	I	2747.524	2746.713	20	48.	672
CU	I	2652.482	2651.693	10	41.	672	CU	I	2749.41	2748.60	1		672
CU	I	2652.853	2652.065	2		672	CU	I	2750.20	2749.39	1		672
CU	I	2654.69	2653.90	1		672	CU	I	2750.546	2749.734	2	56.	672
CU	I	2660.35	2659.57	2		672	CU	I	2751.598	2750.786	5		672
CU	I	2663.26	2662.47	1		672	CU	I	2752.10	2751.29	10	47.	672
CU	I	2663.56	2662.77	1		672	CU	I	2752.622	2751.810	10	63.	672
CU	I	2667.39	2666.59	2	49.	672	CU	I	2756.51	2755.69	5		672
CU	I	2669.12	2668.32	0		672	CU	I	2759.035	2758.221	1		672
CU	I	2671.989	2671.204	20	49.	672	CU	I	2761.07	2760.25	2		672

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	2763.39	2762.58	1		672		CU	I	2848.99	2848.15	1		672	
CU	I	2763.90	2763.09	1		672		CU	I	2852.579	2851.743	15	38.	672	
CU	I	2764.624	2763.809	15	52.	672		CU	I	2857.497	2856.660	2		672	
CU	I	2765.577	2764.762	5		672		CU	I	2859.063	2858.225	50	36.	672	
CU	I	2766.116	2765.300	1		672		CU	I	2859.572	2858.734	140	17.	672	
CU	I	2767.186	2766.371	500	18.	672		CU	I	2862.91	2862.07	5		672	
CU	I	2769.694	2768.878	112	49.	672		CU	I	2868.473	2867.633	1		672	
CU	I	2774.52	2773.70	1		672		CU	I	2869.310	2868.470	10		672	
CU	I	2775.3	2774.5	4		672		CU	I	2870.64	2869.80	2		672	
CU	I	2781.643	2780.828	1		672		CU	I	2875.402	2874.560	20	66.	672	
CU	I	2783.411	2782.592	20	52.	672		CU	I	2876.081	2875.240	2		672	
CU	I	2784.371	2783.551	20	51.	672		CU	I	2876.51	2875.67	10	66.	672	
CU	I	2787.317	2786.496	10	50.	672		CU	I	2876.867	2876.025	2		672	
CU	I	2792.770	2791.951	5		672		CU	I	2877.943	2877.101	5		672	
CU	I	2794.307	2793.485	2		672		CU	I	2879.70	2878.86	5		672	
CU	I	2796.867	2796.045	1		672		CU	I	2880.586	2879.743	2		672	
CU	I	2803.380	2802.556	10	47.	672		CU	I	2883.777	2882.934	390	16.	672	
CU	I	2804.510	2803.686	10	48.	672		CU	I	2886.252	2885.408	5		672	
CU	I	2806.54	2805.71	5		672		CU	I	2891.69	2890.84	50	56.	672	
CU	I	2810.61	2809.78	1		672		CU	I	2892.49	2891.64	30	58.	672	
CU	I	2813.56	2812.74	2		672		CU	I	2897.68	2896.83	0		672	
CU	I	2814.385	2813.558	2		672		CU	I	2898.90	2898.05	0		672	
CU	I	2816.54	2815.71	1		672		CU	I	2900.48	2899.63	1		672	
CU	I	2818.30	2817.47	1		672		CU	I	2902.02	2901.18	1		672	
CU	I	2819.51	2818.68	4		672		CU	I	2905.31	2904.46	0		672	
CU	I	2822.06	2821.23	1		672		CU	I	2906.510	2905.662	5		672	
CU	I	2823.69	2822.86	0		672		CU	I	2912.065	2911.215	30	56.	672	
CU	I	2825.199	2824.370	350	17.	672		CU	I	2913.766	2912.916	2		672	
CU	I	2827.03	2826.20	1		672		CU	I	2921.149	2920.296	10	60.	672	
CU	I	2827.33	2826.50	1		672		CU	I	2923.683	2922.830	10	58.	672	
CU	I	2830.25	2829.42	5		672		CU	I	2924.066	2923.212	20		672	
CU	I	2830.71	2829.88	1		672		CU	I	2924.557	2923.704	80	62.	672	
CU	I	2831.76	2830.93	3		672		CU	I	2925.735	2924.882	10	61.	672	
CU	I	2833.32	2832.49	5		672		CU	I	2926.293	2925.439	30	59.	672	
CU	I	2835.11	2834.30	2		672		CU	I	2926.907	2926.057	10	37.	672	
CU	I	2838.18	2837.34	1		672		CU	I	2931.271	2930.416	5		672	
CU	I	2841.76	2840.92	10	66.	672		CU	I	2932.553	2931.699	10	36.	672	
CU	I	2844.994	2844.160	15	37.	672		CU	I	2933.915	2933.060	20	35.	672	
CU	I	2845.675	2844.842	10	65.	672		CU	I	2938.622	2937.766	2		672	
CU	I	2847.313	2846.478	15	38.	672		CU	I	2939.725	2938.868	15	46.	672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CU	I	2940.310	2939.453	2		672		CU	I	3031.138	3030.258	10		672	
CU	I	2943.30	2942.44	0		672		CU	I	3034.361	3033.480	2		672	
CU	I	2946.09	2945.23	3		672		CU	I	3035.436	3034.555	3		672	
CU	I	2951.267	2950.407	1		672		CU	I	3036.982	3036.101	500	17.	672	
CU	I	2952.07	2951.21	5		672		CU	I	3040.426	3039.488	10		672	
CU	I	2962.028	2961.165	500	15.	672		CU	I	3041.350	3040.467	1		672	
CU	I	2970.66	2969.80	0		672		CU	I	3042.51	3041.62	0		672	
CU	I	2972.37	2971.50	1		672		CU	I	3044.911	3044.028	20	45.	672	
CU	I	2975.540	2974.675	10	46.	672		CU	I	3045.908	3045.025	1		672	
CU	I	2979.162	2978.295	30	58.	672		CU	I	3048.678	3047.795	1		672	
CU	I	2980.247	2979.380	25	57.	672		CU	I	3052.786	3051.901	2		672	
CU	I	2982.992	2982.123	3		672		CU	I	3053.439	3052.554	15	45.	672	
CU	I	2983.653	2982.765	8		672		CU	I	3054.27	3053.38	10	45.	672	
CU	I	2983.906	2983.038	3	58.	672		CU	I	3058.25	3057.36	8		672	
CU	I	2985.135	2984.267	5		672		CU	I	3061.73	3060.84	2		672	
CU	I	2986.794	2985.926	10	45.	672		CU	I	3064.299	3063.411	500	16.	672	
CU	I	2989.880	2989.010	2		672		CU	I	3066.900	3066.011	3		672	
CU	I	2990.872	2990.002	1		672		CU	I	3069.795	3068.906	15	16.	672	
CU	I	2992.650	2991.780	15	55.	672		CU	I	3071.86	3070.97	5		672	
CU	I	2995.00	2994.13	5		672		CU	I	3072.85	3071.96	2		672	
CU	I	2998.235	2997.364	450	17.	672		CU	I	3074.688	3073.798	370	15.	672	
CU	I	2999.255	2998.384	125	14.	672		CU	I	3083.43	3082.53	1		672	
CU	I	3002.11	3001.24	5		672		CU	I	3085.86	3084.96	2		672	
CU	I	3002.647	3001.774	2		672		CU	I	3087.36	3086.47	2		672	
CU	I	3003.154	3002.281	10		672		CU	I	3089.025	3088.132	112		672	
CU	I	3005.67	3004.73	1		672		CU	I	3094.884	3093.989	390	14.	672	
CU	I	3008.68	3007.80	1		672		CU	I	3100.825	3099.928	350		672	
CU	I	3008.99	3008.12	5		672		CU	I	3107.811	3106.912	1		672	
CU	I	3011.713	3010.838	450	14.	672		CU	I	3109.349	3108.452	240		672	
CU	I	3012.880	3012.005	160		672		CU	I	3109.504	3108.605	450		672	
CU	I	3013.741	3012.775	1		672		CU	I	3114.382	3113.482	50		672	
CU	I	3014.385	3013.510	2		672		CU	I	3115.678	3114.778	3		672	
CU	I	3015.723	3014.848	30	45.	672		CU	I	3117.249	3116.348	200		672	
CU	I	3017.12	3016.24	0		672		CU	I	3119.257	3118.355	5		672	
CU	I	3018.97	3018.09	2		672		CU	I	3121.336	3120.435	50		672	
CU	I	3022.421	3021.544	170	45.	672		CU	I	3122.83	3121.93	0		672	
CU	I	3023.486	3022.608	170		672		CU	I	3123.91	3123.00	1		672	
CU	I	3025.872	3024.994	100		672		CU	I	3125.276	3124.373	1		672	
CU	I	3028.70	3027.82	5		672		CU	I	3127.012	3126.109	370		672	
CU	I	3030.48	3029.60	2		672		CU	I	3129.605	3128.701	250		672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	3132.23	3131.33	5		672		CU	I	3248.474	3247.540	1000	1.	672	
CU	I	3135.92	3135.01	1		672		CU	I	3253.155	3252.220	250		672	
CU	I	3138.62	3137.72	5		672		CU	I	3266.961	3266.023	250		672	
CU	I	3140.08	3139.17	0		672		CU	I	3269.217	3268.278	250		672	
CU	I	3141.219	3140.312	200		672		CU	I	3274.898	3273.957	1000	1.	672	
CU	I	3143.351	3142.444	270		672		CU	I	3278.251	3277.310	250		672	
CU	I	3143.703	3142.797	8		672		CU	I	3280.757	3279.815	440	15.	672	
CU	I	3147.730	3146.821	210		672		CU	I	3283.658	3282.716	370		672	
CU	I	3149.242	3148.333	3		672		CU	I	3285.961	3285.017	1		672	
CU	I	3149.48	3148.57	2		672		CU	I	3287.136	3286.193	2		672	
CU	I	3150.417	3149.508	30		672		CU	I	3291.485	3290.541	390		672	
CU	I	3152.53	3151.62	8		672		CU	I	3293.338	3292.393	112		672	
CU	I	3153.20	3152.29	1		672		CU	I	3293.772	3292.827	250		672	
CU	I	3157.540	3156.629	210	14.	672		CU	I	3293.910	3292.965	210		672	
CU	I	3158.94	3158.02	1		672		CU	I	3294.760	3293.815	2		672	
CU	I	3160.956	3160.047	25		672		CU	I	3295.113	3294.168	5		672	
CU	I	3170.596	3169.681	220		672		CU	I	3298.037	3297.093	0		672	
CU	I	3172.578	3171.663	5		672		CU	I	3303.734	3302.787	4		672	
CU	I	3176.59	3175.67	60		672		CU	I	3306.478	3305.530	4		672	
CU	I	3180.260	3179.343	2		672		CU	I	3308.897	3307.948	25		672	
CU	I	3193.14	3192.22	2		672		CU	I	3310.507	3309.558	4		672	
CU	I	3195.019	3194.099	390	14.	672		CU	I	3311.935	3310.987	8		672	
CU	I	3209.155	3208.231	370	14.	672		CU	I	3314.149	3313.199	0		672	
CU	I	3210.422	3209.498	4		672		CU	I	3315.78	3314.82	1		672	
CU	I	3212.36	3211.43	30		672		CU	I	3318.169	3317.218	270		672	
CU	I	3218.57	3217.64	10		672		CU	I	3320.634	3319.682	125		672	
CU	I	3219.130	3218.204	5		672		CU	I	3326.765	3325.812	3		672	
CU	I	3221.58	3220.65	8		672		CU	I	3327.281	3326.328	3		672	
CU	I	3222.28	3221.35	8		672		CU	I	3330.590	3329.636	150		672	
CU	I	3224.363	3223.435	4		672		CU	I	3336.171	3335.215	200		672	
CU	I	3225.592	3224.664	4		672		CU	I	3338.801	3337.845	15		672	
CU	I	3226.015	3225.088	2		672		CU	I	3343.411	3342.454	5		672	
CU	I	3226.627	3225.698	5		672		CU	I	3343.73	3342.77	5		672	
CU	I	3227.469	3226.541	50		672		CU	I	3350.239	3349.279	45		672	
CU	I	3227.531	3226.602	125		672		CU	I	3354.426	3353.466	10		672	
CU	I	3232.108	3231.178	250		672		CU	I	3355.434	3354.474	60		672	
CU	I	3234.830	3233.899	210		672		CU	I	3359.23	3358.27	2		672	
CU	I	3236.644	3235.713	250		672		CU	I	3359.70	3358.74	2		672	
CU	I	3240.09	3239.16	125		672		CU	I	3363.09	3362.12	2		672	
CU	I	3244.097	3243.164	390		672		CU	I	3366.305	3365.342	7		672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	3376.14	3375.18	8		672	
CU	I	3376.638	3375.672	3		672	
CU	I	3379.674	3378.707	2		672	
CU	I	3380.620	3379.653	5		672	
CU	I	3380.831	3379.864	3		672	
CU	I	3382.092	3381.124	60		672	
CU	I	3382.388	3381.421	140		672	
CU	I	3385.77	3384.80	15		672	
CU	I	3386.363	3385.394	2		672	
CU	I	3389.04	3388.07	8		672	
CU	I	3392.987	3392.016	8		672	
CU	I	3396.447	3395.476	60		672	
CU	I	3397.295	3396.324	10		672	
CU	I	3403.217	3402.244	150		672	
CU	I	3404.080	3403.107	5		672	
CU	I	3405.63	3404.66	112		672	
CU	I	3414.083	3413.107	10		672	
CU	I	3414.319	3413.343	140		672	
CU	I	3414.993	3414.017	5		672	
CU	I	3416.77	3415.80	140		672	
CU	I	3421.143	3420.166	8		672	
CU	I	3423.07	3422.10	1		672	
CU	I	3428.85	3427.87	1		672	
CU	I	3434.953	3433.972	3		672	
CU	I	3437.526	3436.543	5		672	
CU	I	3441.489	3440.507	155		672	
CU	I	3448.574	3447.590	3		672	
CU	I	3451.317	3450.332	270		672	
CU	I	3455.671	3454.686	140		672	
CU	I	3458.837	3457.850	270		672	
CU	I	3460.415	3459.428	25		672	
CU	I	3463.124	3462.137	1		672	
CU	I	3464.487	3463.499	5		672	
CU	I	3466.385	3465.401	50		672	
CU	I	3467.23	3466.24	25		672	
CU	I	3472.738	3471.748	2		672	
CU	I	3473.132	3472.141	140		672	
CU	I	3475.570	3474.578	5		672	
CU	I	3476.991	3475.999	270		672	
CU	I	3482.607	3481.614	5		672	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	I	3484.754	3483.761	1		672	
CU	I	3488.560	3487.566	6		672	
CU	I	3489.853	3488.858	1		672	
CU	I	3491.953	3490.958	1		672	
CU	I	3495.50	3494.50	1		672	
CU	I	3499.061	3498.063	112		672	
CU	I	3499.935	3498.938	3		672	
CU	II	2000.3459	1999.6979	250	16.	612	
CU	II	2002.92	2002.27	3		670	
CU	II	2009.97	2009.32	0		670	
CU	II	2013.6347	2012.9844	25	80.	612	
CU	II	2016.2298	2015.5791	15	18.	612	
CU	II	2017.5442	2016.8931	10	15.	612	
CU	II	2018.26	2017.60	0		670	
CU	II	2022.85	2022.19	1		670	
CU	II	2026.1413	2025.4887	75	17.	612	
CU	II	2027.7855	2027.1327	10	17.	612	
CU	II	2030.6003	2029.9470	15	81.	612	
CU	II	2031.6891	2031.0356	45	79.	612	
CU	II	2036.5039	2035.8545	275	15.	612	
CU	II	2037.5737	2036.9190	40		612	
CU	II	2037.7819	2037.1272	250	16.	612	
CU	II	2044.4581	2043.8022	350	15.	612	
CU	II	2048.3350	2047.6783	15	180.	612	
CU	II	2054.9100	2054.2521	10		612	
CU	II	2055.0741	2054.4162	10		612	
CU	II	2055.6375	2054.9795	300	15.	612	
CU	II	2059.29	2058.63	0		670	
CU	II	2063.0786	2062.4193	25	80.	612	
CU	II	2066.9207	2066.2606	20	81.	612	
CU	II	2070.5957	2069.9349	2		612	
CU	II	2074.88	2074.22	0		670	
CU	II	2079.3252	2078.6628	100	78.	612	
CU	II	2080.7229	2080.0602	5		612	
CU	II	2083.59	2082.92	2		670	
CU	II	2084.987	2084.323	4		612	
CU	II	2085.9381	2085.2744	8	14.	612	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	II	2088.5834	2087.9192	10		612		CU	II	2110.965	2110.296	5		612	
CU	II	2088.6339	2087.9697	40	94.	612		CU	II	2111.9631	2111.2944	40		612	
CU	II	2094.3029	2093.6376	35	79.	612		CU	II	2112.7694	2112.1004	300	55.	612	
CU	II	2095.4591	2094.7935	5		612		CU	II	2113.1945	2112.5255	4		612	
CU	II	2096.8559	2096.1900	4		612		CU	II	2114.52	2113.85	1		670	
CU	II	2098.9737	2098.3075	15		612		CU	II	2117.9798	2117.3098	325	94.	612	
CU	II	2099.0647	2098.3984	115	95.	612		CU	II	2119.044	2118.374	10	137.	612	
CU	II	2099.4078	2098.7415	5		612		CU	II	2123.6511	2122.9800	350	54.	612	
CU	II	2105.4644	2104.7969	325	15.	612		CU	II	2125.7778	2125.1063	100	136.	612	
CU	II	2107.0464	2106.3786	3		612		CU	II	2125.9390	2125.2674	15		612	
								CU	II	2126.7163	2126.0445	350	14.	612	
								CU	II	2130.7583	2130.0858	40		612	
								CU	II	2131.9205	2131.2558	8		612	
								CU	II	2135.0144	2134.3410	425	52.	612	
								CU	II	2136.6547	2135.9810	900	14.	612	
								CU	II	2145.3821	2144.7066	4		612	
								CU	II	2146.1685	2145.4929	75	78.	612	
								CU	II	2147.5958	2146.9199	75	156.	612	
								CU	II	2149.6602	2148.9839	400	14.	612	
								CU	II	2152.4861	2151.8092	150	95.	612	
								CU	II	2153.59	2152.91	0		670	
								CU	II	2159.0900	2158.4117	2		612	
								CU	II	2161.9993	2161.3205	150	132.	612	
								CU	II	2162.4796	2161.8007	2		612	
								CU	II	2167.53	2166.85	0		670	
								CU	II	2173.21	2172.53	1		670	
								CU	II	2175.6636	2174.9820	250	155.	612	
								CU	II	2180.0929	2179.4103	700	14.	612	H
								CU	II	2181.4344	2180.7516	50	104.	612	
								CU	II	2182.1080	2181.4251	20		612	
								CU	II	2183.5426	2182.8593	45		612	
								CU	II	2190.0547	2189.3701	25		612	
								CU	II	2190.3152	2189.6305	700	53.	612	
								CU	II	2191.19	2190.50	1		670	
								CU	II	2192.9534	2192.2681	900	14.	612	H
								CU	II	2196.3685	2195.6826	400	134.	612	
								CU	II	2198.5560	2197.8696	5		612	
								CU	II	2200.99	2200.30	1		670	
								CU	II	2201.1957	2200.5088	100	135.	612	
								CU	II	2201.69	2201.00	1		670	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	II	2210.4945	2209.8056	200	134.	612		CU	II	2300.1973	2299.4892	10		612	
CU	II	2210.9571	2210.2681	750	52.	612		CU	II	2310.2299	2309.5195	50		612	
CU	II	2213.4371	2212.7476	75	166.	612		CU	II	2316.393	2315.682	1		612	
CU	II	2215.7960	2215.1060	250	168.	612		CU	II	2323.7179	2323.0045	25		612	
CU	II	2218.7988	2218.1081	750	13.	612		CU	II	2324.6422	2323.9286	40		612	
CU	II	2219.2037	2218.5130	150	137.	612		CU	II	2326.625	2325.911	2		612	
CU	II	2222.341	2221.650	5		612		CU	II	2328.2818	2327.5675	1		612	
CU	II	2225.3834	2224.6913	100	178.	612		CU	II	2334.459	2333.743	2		612	
CU	II	2227.4730	2226.7805	150	134.	612		CU	II	2336.8875	2336.1713	40	177.	612	
CU	II	2229.5609	2228.8680	350	13.	612		CU	II	2340.4452	2339.7281	10		612	
CU	II	2230.5467	2229.8536	150	135.	612		CU	II	2342.0893	2341.3719	2		612	
CU	II	2230.8378	2230.1446	50	134.	612		CU	II	2342.890	2342.173	5		612	
CU	II	2231.0919	2230.3986	25	132.	612		CU	II	2347.37	2346.65	0		670	
CU	II	2231.6453	2230.9519	100	167.	612		CU	II	2348.61	2347.89	0		670	
CU	II	2232.2759	2231.5824	75	133.	612		CU	II	2349.4527	2348.7336	15	133.	612	
CU	II	2242.8389	2242.1431	25		612		CU	II	2350.9102	2350.1908	3		612	
CU	II	2243.3143	2242.6184	900	52.	612		CU	II	2353.0115	2352.2916	3		612	
CU	II	2243.4115	2242.7156	2		612		CU	II	2354.6645	2353.9443	3		612	
CU	II	2243.7905	2243.0945	25		612		CU	II	2355.7354	2355.0149	35	77.	612	
CU	II	2247.6991	2247.0023	1000	13.	612	H	CU	II	2357.3616	2356.6408	20	13.	612	
CU	II	2249.6645	2248.9673	150	154.	612		CU	II	2361.3612	2360.6394	1		612	
CU	II	2252.5549	2251.8571	5		612		CU	II	2361.9126	2361.1907	3		612	
CU	II	2253.731	2253.033	2		612		CU	II	2363.4037	2362.6815	3		612	
CU	II	2255.6871	2254.9886	75		612		CU	II	2364.8769	2364.1544	10		612	
CU	II	2263.9140	2263.2137	75	133.	612		CU	II	2367.703	2366.980	1		612	
CU	II	2264.4868	2263.7864	150	153.	612		CU	II	2370.6137	2369.8899	150	51.	612	
CU	II	2265.268	2264.568	3		612		CU	II	2371.4710	2370.7470	25	76.	612	
CU	II	2266.0658	2265.3650	40		612		CU	II	2377.0288	2376.3036	50	176.	612	
CU	II	2275.4442	2274.7414	10	77.	612		CU	II	2378.5181	2377.7925	3		612	
CU	II	2276.9614	2276.2583	200	13.	612		CU	II	2379.1310	2378.4053	2		612	
CU	II	2279.0420	2278.3384	40		612		CU	II	2379.5705	2378.8447	40		612	
CU	II	2281.6471	2280.9430	30		612		CU	II	2380.1312	2379.4053	8		612	
CU	II	2284.907	2284.203	1		612		CU	II	2385.58	2384.80	5		670	
CU	II	2287.3507	2286.6454	100	152.	612		CU	II	2385.6716	2384.9444	8	76.	612	
CU	II	2290.1226	2289.4166	75	76.	612		CU	II	2385.823	2385.096	1		612	
CU	II	2290.8674	2290.1613	3		612		CU	II	2393.415	2392.686	1		612	
CU	II	2291.7087	2291.0024	50	179.	612		CU	II	2393.9895	2393.2604	4		612	
CU	II	2293.3969	2292.6902	3		612		CU	II	2394.7594	2394.0301	3		612	
CU	II	2293.6773	2292.9705	3		612		CU	II	2400.8451	2400.1147	60	50.	612	
CU	II	2295.0750	2294.3680	175	13.	612		CU	II	2404.0687	2403.3373	20	76.	612	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	II	2414.9225	2414.1886	5	612		CU	II	2530.0644	2529.3040	150	131.	612
CU	II	2415.5913	2414.8573	4	612		CU	II	2541.147	2540.384	1		612
CU	II	2421.21	2420.48	1	670		CU	II	2543.6985	2542.9349	2		612
CU	II	2422.6785	2421.9429	2	612		CU	II	2545.5692	2544.8051	300	92.	612
CU	II	2425.1703	2424.4341	75	612	76.	CU	II	2554.1094	2553.3434	25		612
CU	II	2427.295	2426.559	2	612		CU	II	2557.1369	2556.3702	2		612
CU	II	2427.734	2426.997	1	612		CU	II	2558.9805	2558.2133	4		612
CU	II	2429.6651	2428.9279	15	612		CU	II	2560.1979	2559.4304	2		612
CU	II	2431.4152	2430.6777	1	612		CU	II	2560.560	2559.793	1		612
CU	II	2433.158	2432.420	1	612		CU	II	2565.4948	2564.7260	4		612
CU	II	2443.4054	2442.6651	20	612	103.	CU	II	2565.8151	2565.0463	2		612
CU	II	2444.0666	2443.3261	20	612		CU	II	2569.676	2568.906	2		612
CU	II	2448.9564	2448.2148	10	612		CU	II	2572.5259	2571.7555	100	131.	612
CU	II	2453.694	2452.952	1	612		CU	II	2575.1838	2574.4128	2		612
CU	II	2456.752	2456.009	2	612		CU	II	2575.4085	2574.6375	4		612
CU	II	2458.377	2457.633	1	612		CU	II	2576.6734	2575.9021	2		612
CU	II	2459.55	2458.81	2	670		CU	II	2577.753	2576.982	2		612
CU	II	2461.606	2460.861	1	612		CU	II	2591.1764	2590.4016	1		612
CU	II	2463.359	2462.614	3	612		CU	II	2591.3035	2590.5287	150	130.	612
CU	II	2465.052	2464.307	1	612		CU	II	2592.1934	2591.4183	2		612
CU	II	2469.0942	2468.3479	10	612		CU	II	2599.5897	2598.8129	175	92.	612
CU	II	2469.2468	2468.5005	45	612	93.	CU	II	2601.0472	2600.2701	200	151	612
CU	II	2474.0812	2473.3337	50	612	76.	CU	II	2603.7478	2602.9700	3		612
CU	II	2474.8874	2474.1398	5	612		CU	II	2605.304	2604.526	1		612
CU	II	2477.1925	2476.4444	15	612		CU	II	2606.75	2605.97	1		670
CU	II	2477.87	2477.12	2	670		CU	II	2607.3593	2606.5807	2		612
CU	II	2484.534	2483.785	1	612		CU	II	2607.6551	2606.8764	4		612
CU	II	2485.259	2484.509	1	612		CU	II	2607.7764	2606.9977	3		612
CU	II	2486.5426	2485.7924	100	612	92.	CU	II	2610.6886	2609.9091	15		612
CU	II	2490.4035	2489.6527	20	612		CU	II	2611.5736	2610.7940	2		612
CU	II	2495.6675	2494.9151	2	612		CU	II	2612.0345	2611.2547	1		612
CU	II	2499.754	2499.001	2	612		CU	II	2613.3476	2612.5676	1		612
CU	II	2500.590	2499.837	1	612		CU	II	2613.4597	2612.6796	3		612
CU	II	2502.2476	2501.4937	2	612		CU	II	2615.1935	2614.4130	40		612
CU	II	2507.0282	2506.2732	150	612	92.	CU	II	2619.9924	2619.2107	15		612
CU	II	2515.0492	2514.2923	2	612		CU	II	2621.4479	2620.6659	65		612
CU	II	2515.8397	2515.0826	4	612		CU	II	2637.4048	2636.6190	4		612
CU	II	2519.7068	2518.9488	15	612	103.	CU	II	2640.9057	2640.1190	1		612
CU	II	2527.0879	2526.3279	1	612		CU	II	2649.3945	2648.6059	2		612
CU	II	2527.3525	2526.5927	125	612	92.	CU	II	2656.7551	2655.9646	1		612

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CU	II	2667.0837	2666.2908	200	130.	612		CU	II	2793.0476	2792.2242	2		612	
CU	II	2668.2164	2667.4232	2		612		CU	II	2794.4318	2793.6081	3		612	
CU	II	2676.8615	2676.0663	5		612		CU	II	2796.1222	2795.2981	45		612	
CU	II	2677.1734	2676.3781	2		612		CU	II	2796.4815	2795.6573	30		612	
CU	II	2681.97	2681.18	1		670		CU	II	2796.6974	2795.8731	3		612	
CU	II	2682.2934	2681.4968	2		612		CU	II	2797.0870	2796.2626	4		612	
CU	II	2683.5455	2682.7487	1		612		CU	II	2798.0797	2797.2551	40		612	
CU	II	2690.0980	2689.2996	750	130.	612		CU	II	2798.2584	2797.4337	50		612	
CU	II	2692.6243	2691.8253	1		612		CU	II	2798.3741	2797.5495	2		612	
CU	II	2693.2973	2692.4981	8		612		CU	II	2799.655	2799.830	1		612	
CU	II	2701.7628	2700.9616	700	165.	612		CU	II	2800.3534	2799.5282	175		612	
CU	II	2703.9859	2703.1841	650	130.	612		CU	II	2800.5058	2799.6806	75		612	
CU	II	2705.312	2704.520	3		612		CU	II	2801.8757	2801.0502	5		612	
CU	II	2709.0727	2708.2697	30		612		CU	II	2802.144	2801.318	2		612	
CU	II	2710.5627	2709.7594	3		612		CU	II	2804.097	2803.271	2		612	
CU	II	2711.0491	2710.2456	15		612		CU	II	2805.015	2804.189	1		612	
CU	II	2711.4107	2710.6072	2		612		CU	II	2807.9822	2807.1552	4		612	
CU	II	2712.381	2711.577	1		612		CU	II	2811.193	2810.366	1		612	
CU	II	2712.6690	2711.8651	40		612		CU	II	2811.6319	2810.8039	100		612	
CU	II	2714.3123	2713.5080	700	130.	612		CU	II	2814.4603	2813.6317	25		612	
CU	II	2716.2088	2715.4041	30		612		CU	II	2817.0272	2816.1980	20		612	
CU	II	2719.5830	2718.7775	650	174.	612		CU	II	2817.9139	2817.0844	2		612	
CU	II	2719.837	2719.031	1		612		CU	II	2829.5292	2828.6970	20		612	
CU	II	2722.4836	2721.6774	300	164.	612		CU	II	2829.7509	2828.9185	20		612	
CU	II	2728.5026	2727.6949	2		612		CU	II	2831.0642	2830.2316	35		612	
CU	II	2729.012	2728.204	1		612		CU	II	2833.2547	2832.4215	20		612	
CU	II	2732.7567	2731.9480	50		612		CU	II	2833.886	2833.053	1		612	
CU	II	2738.1517	2737.3417	125	130.	612		CU	II	2835.804	2834.970	3		612	
CU	II	2740.5770	2739.7664	90	174.	612		CU	II	2837.1241	2836.2900	40		612	
CU	II	2746.0832	2745.2712	275	150.	612		CU	II	2837.531	2836.697	5		612	
CU	II	2758.1434	2757.3285	3		612		CU	II	2838.2028	2837.3683	350	130.	612	
CU	II	2760.4226	2759.6072	3		612		CU	II	2841.3271	2840.4920	40		612	
CU	II	2761.9021	2761.0863	2		612		CU	II	2847.7052	2846.8695	40		612	
CU	II	2763.2978	2762.4817	1		612		CU	II	2849.3372	2848.5001	90		612	
CU	II	2763.84	2763.02	0		670		CU	II	2849.5625	2848.7253	90		612	
CU	II	2765.546	2764.730	2		612		CU	II	2850.7902	2849.9527	1		612	
CU	II	2770.4871	2769.6692	800	15	612		CU	II	2852.7330	2851.8950	50		612	
CU	II	2789.0840	2788.2616	45		612		CU	II	2852.9146	2852.0766	75		612	
CU	II	2790.045	2789.223	1		612		CU	II	2853.0167	2852.1786	40		612	
CU	II	2792.6180	2791.7947	200		612		CU	II	2853.2425	2852.4044	35		612	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
CU	II	2854.5789	2853.7404	4		612		CU	II	2946.228	2945.368	2		670	
CU	II	2855.8247	2854.9860	10		612		CU	II	2948.1654	2947.3038	6		612	
CU	II	2855.932	2855.093	2		612		CU	II	2950.208	2949.346	5		612	
CU	II	2856.1595	2855.3207	30		612		CU	II	2958.185	2957.321	10		612	
CU	II	2857.0501	2856.2111	2		612		CU	II	2960.193	2959.329	7		612	
CU	II	2858.281	2857.442	2		612		CU	II	2969.611	2968.745	2		612	
CU	II	2858.5879	2857.7485	100	164.	612		CU	II	2972.342	2971.475	2		612	
CU	II	2859.8450	2859.0053	65		612		CU	II	2974.5177	2973.6498	15		612	
CU	II	2860.7593	2859.9193	15		612		CU	II	2976.140	2975.272	3		612	
CU	II	2861.0894	2860.2494	10		612		CU	II	2976.4980	2975.6295	12		612	
CU	II	2863.1639	2862.3234	20		612		CU	II	2977.877	2977.008	2		612	
CU	II	2867.112	2866.271	5		612		CU	II	2982.6569	2981.7868	15		612	
CU	II	2869.6336	2868.7915	3		612		CU	II	2982.813	2981.945	15		612	
CU	II	2873.7894	2872.9462	4		612		CU	II	2984.6383	2983.7677	12		612	
CU	II	2876.1780	2875.3342	4		612		CU	II	2987.2058	2986.3346	100		612	
CU	II	2877.863	2877.019	2		612		CU	II	2988.1066	2987.2352	15		612	
CU	II	2878.5441	2877.6998	600	174.	612		CU	II	2993.155	2992.283	2		612	
CU	II	2881.5455	2880.7004	20		612		CU	II	2993.542	2992.670	5		612	
CU	II	2881.8669	2881.0217	10		612		CU	II	2993.897	2993.024	5		612	
CU	II	2884.034	2883.189	20		612		CU	II	2994.1397	2993.2668	10		612	
CU	II	2885.0415	2884.1955	275	164.	612		CU	II	2997.715	2996.841	8		612	
CU	II	2885.6022	2884.7562	2		612		CU	II	2999.767	2998.893	2		612	
CU	II	2892.4565	2891.6088	1		612		CU	II	3000.746	2999.871	6		612	
CU	II	2898.0698	2897.2207	15		612		CU	II	3004.934	3004.058	3		612	
CU	II	2908.7681	2907.9163	10		612		CU	II	3011.469	3010.592	20		612	
CU	II	2909.715	2908.863	1		612		CU	II	3013.155	3012.277	2		612	
CU	II	2913.306	2912.453	2		612		CU	II	3014.1676	3013.2897	2		612	
CU	II	2918.6305	2917.7763	5		612		CU	II	3015.4228	3014.5446	75		612	
CU	II	2924.113	2923.257	2		612		CU	II	3025.062	3024.182	3		612	
CU	II	2927.1063	2926.2500	2		612		CU	II	3028.270	3027.388	1		612	
CU	II	2928.1106	2927.2540	30		612		CU	II	3038.492	3037.608	2		612	
CU	II	2928.356	2927.500	3		612		CU	II	3038.685	3037.801	10		612	
CU	II	2929.048	2928.192	2		612		CU	II	3042.5638	3041.6788	65		612	
CU	II	2932.647	2931.789	2		612		CU	II	3043.7410	3042.8556	5		612	
CU	II	2933.0831	2932.2253	10		612		CU	II	3050.1701	3049.2831	2		612	
CU	II	2934.423	2933.565	2		612		CU	II	3052.835	3051.947	2		612	
CU	II	2937.8143	2936.9553	25		612		CU	II	3053.047	3052.160	2		612	
CU	II	2940.5639	2939.7042	10		612		CU	II	3054.4618	3053.5738	3		612	
CU	II	2942.074	2941.214	10		612		CU	II	3056.5020	3055.6135	10		612	
CU	II	2943.484	2942.623	2		612		CU	II	3057.7380	3056.8491	5		612	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
CU	II	3060.177	3059.287	1		612		CU	II	3175.8865	3174.9680	10		612	
CU	II	3060.7534	3059.8638	7		612		CU	II	3177.2283	3176.3094	2		612	
CU	II	3063.1716	3062.2814	10		612		CU	II	3178.6584	3177.7392	15		612	
CU	II	3087.4931	3086.6019	7		612		CU	II	3178.8885	3177.9692	15		612	
CU	II	3081.215	3080.320	8		612		CU	II	3180.237	3179.317	2		612	
CU	II	3082.3431	3081.4481	3		612		CU	II	3180.7044	3179.7846	50		612	
CU	II	3083.830	3082.935	2		612		CU	II	3181.2130	3180.2931	4		612	
CU	II	3084.2632	3083.3678	15		612		CU	II	3181.713	3180.793	2		612	
CU	II	3086.330	3085.434	2		612		CU	II	3183.0920	3182.1717	75		612	
CU	II	3086.478	3085.582	2		612		CU	II	3185.5433	3184.6224	4		612	
CU	II	3089.6458	3088.7489	12		612		CU	II	3185.7614	3184.8404	90		612	
CU	II	3098.7642	3097.8651	10		612		CU	II	3186.6462	3185.7249	50		612	
CU	II	3111.3768	3110.4745	2		612		CU	II	3186.9361	3186.0148	50		612	
CU	II	3122.3010	3121.3959	5		612		CU	II	3187.2625	3186.3411	25		612	
CU	II	3122.5479	3121.6428	8		612		CU	II	3187.9643	3187.0427	10		612	
CU	II	3122.776	3121.871	3		612		CU	II	3189.645	3188.723	4		612	
CU	II	3125.6287	3124.7229	10		612		CU	II	3192.019	3191.100	0		670	
CU	II	3131.8971	3130.9897	2		612		CU	II	3193.225	3192.302	2		612	
CU	II	3140.6982	3139.7885	8		612		CU	II	3199.0295	3198.1052	8		612	
CU	II	3141.3171	3140.4073	3		612		CU	II	3204.862	3203.939	0		670	
CU	II	3143.923	3143.013	2		612		CU	II	3205.4491	3204.5231	5		612	
CU	II	3146.9234	3146.0122	5		612		CU	II	3207.6113	3206.6848	40		612	
CU	II	3149.6989	3148.7869	2		612		CU	II	3209.2295	3208.3026	12		612	
CU	II	3150.594	3149.681	3		612		CU	II	3210.379	3209.452	1		612	
CU	II	3151.1757	3150.2634	1		612		CU	II	3217.9187	3216.9896	4		612	
CU	II	3151.5546	3150.6422	25		612		CU	II	3218.242	3217.312	5		612	
CU	II	3151.9630	3151.0505	75		612		CU	II	3218.570	3217.641	3		612	
CU	II	3153.8129	3152.9000	30		612		CU	II	3219.1959	3218.2664	2		612	
CU	II	3155.0068	3154.0935	6		612		CU	II	3219.5574	3218.6278	3		612	
CU	II	3156.2896	3155.3760	4		612		CU	II	3219.6938	3218.7642	10		612	
CU	II	3156.746	3155.832	2		612		CU	II	3222.901	3221.970	2		612	
CU	II	3157.1958	3156.2820	20		612		CU	II	3226.2701	3225.3388	30		612	
CU	II	3158.8043	3157.8901	0		612		CU	II	3227.2605	3226.3290	2		612	
CU	II	3159.5873	3158.6729	30		612		CU	II	3227.3710	3226.4394	5		612	
CU	II	3162.9587	3162.0434	15		612		CU	II	3227.5128	3226.5812	40		612	
CU	II	3164.5995	3163.6838	5		612		CU	II	3230.4849	3229.5526	12		612	
CU	II	3167.5043	3166.5879	20		612		CU	II	3234.3087	3233.3754	8		612	
CU	II	3171.6111	3170.6936	5		612		CU	II	3235.6046	3234.6710	4		612	
CU	II	3172.5421	3171.6244	3		612		CU	II	3235.6672	3234.7335	12		612	
CU	II	3174.5274	3173.6092	3		612		CU	II	3238.0772	3237.1429	2		612	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	II	3238.1760	3237.2417	15		612		CU	II	3294.2811	3293.3325	40		612	
CU	II	3238.5080	3237.5736	10		612		CU	II	3295.2841	3294.3353	50		612	
CU	II	3239.6506	3238.7160	15		612		CU	II	3296.0508	3295.1018	90		612	
CU	II	3239.7579	3238.8232	50		612		CU	II	3298.1478	3297.1983	90		612	
CU	II	3240.5848	3239.6499	2		612		CU	II	3298.2956	3297.3461	15		612	
CU	II	3242.7493	3241.8138	10		612		CU	II	3298.5184	3297.5687	15		612	
CU	II	3243.3609	3242.4253	2		612		CU	II	3301.1626	3300.2123	4		612	
CU	II	3246.8767	3245.9402	12		612		CU	II	3301.3873	3300.4370	80		612	
CU	II	3247.727	3246.790	5		612		CU	II	3301.5913	3300.6409	90		612	
CU	II	3251.4029	3250.4652	95		612		CU	II	3301.8319	3300.8814	110		612	
CU	II	3251.8116	3250.8739	10		612		CU	II	3302.1791	3301.2286	250		612	
CU	II	3252.702	3251.764	2		612		CU	II	3304.1327	3303.1817	15		612	
CU	II	3253.712	3252.7829	20		612		CU	II	3304.4643	3303.5132	75		612	
CU	II	3254.0461	3253.1078	10		612		CU	II	3304.8210	3303.8698	25		612	
CU	II	3258.0627	3257.1234	2		612		CU	II	3307.3408	3306.3890	2		612	
CU	II	3260.9649	3260.0248	20		612		CU	II	3308.6097	3307.6576	35		612	
CU	II	3261.1098	3260.1696	2		612		CU	II	3308.8249	3307.8726	35		612	
CU	II	3262.5469	3261.6469	25		612		CU	II	3309.0574	3308.1051	25		612	
CU	II	3264.4956	3263.5546	3		612		CU	II	3309.2049	3308.2526	2		612	
CU	II	3264.8587	3263.9176	30		612		CU	II	3309.3861	3308.4337	4		612	
CU	II	3266.3362	3265.3948	10		612		CU	II	3311.291	3310.338	1		612	
CU	II	3269.0411	3268.0990	2		612		CU	II	3312.9810	3312.0277	9		612	
CU	II	3269.1316	3268.1895	4		612		CU	II	3313.0684	3312.1151	11		612	
CU	II	3269.7013	3268.7591	12		612		CU	II	3313.6305	3312.6770	7		612	
CU	II	3271.0530	3270.1104	9		612		CU	II	3316.6982	3315.7440	15		612	
CU	II	3275.446	3274.503	9		612		CU	II	3317.2300	3316.2756	200		612	
CU	II	3276.8467	3275.9026	20		612		CU	II	3317.4660	3316.5116	3		612	
CU	II	3279.910	3278.965	2		612		CU	II	3318.0929	3317.1383	75		612	
CU	II	3282.021	3281.076	2		612		CU	II	3319.270	3318.315	1		612	
CU	II	3282.6419	3281.6963	70		612		CU	II	3319.9753	3319.0202	10		612	
CU	II	3282.9563	3282.0106	10		612		CU	II	3320.991	3320.039	1		670	
CU	II	3283.5480	3282.6022	5		612		CU	II	3322.069	3321.114	6		612	
CU	II	3284.0417	3283.0958	2		612		CU	II	3322.5083	3321.5526	25		612	
CU	II	3284.1891	3283.2431	9		612		CU	II	3322.6725	3321.7168	5		612	
CU	II	3291.3652	3290.4175	400		612		CU	II	3323.5922	3322.6362	50		612	
CU	II	3292.0077	3291.0597	25		612		CU	II	3325.7860	3324.8295	15		612	
CU	II	3292.7571	3291.8090	20		612		CU	II	3325.9800	3325.0234	9		612	
CU	II	3293.0714	3292.1231	60		612		CU	II	3326.585	3325.628	2		612	
CU	II	3293.6673	3292.7189	35		612		CU	II	3326.7755	3325.8187	15		612	
CU	II	3293.9449	3292.9964	15		612		CU	II	3326.8804	3325.9236	5		612	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	111	2001.429	2000.781	50		724		CU	111	2346.917	2346.198	170		724	
CU	111	2002.565	2001.917	2		724		CU	111	2347.493	2346.774	10		724	
CU	111	2004.016	2003.367	1		724		CU	111	2348.189	2347.470	3		724	
CU	111	2013.876	2013.225	170		724		CU	111	2354.372	2353.652	10		724	
CU	111	2039.232	2038.577	50		724		CU	111	2355.568	2354.848	10		724	
CU	111	2043.982	2043.326	100		724		CU	111	2357.881	2357.160	1		724	
CU	111	2077.708	2077.046	75		724		CU	111	2359.496	2358.775	3		724	
CU	111	2077.803	2077.141	20		724		CU	111	2360.884	2360.162	20		724	
CU	111	2078.475	2077.813	5		724		CU	111	2362.308	2361.586	170		724	
CU	111	2084.115	2083.452	2		724		CU	111	2363.957	2363.234	100		724	
CU	111	2088.406	2087.742	15		724		CU	111	2368.638	2367.915	1		724	
CU	111	2093.073	2092.408	15		724		CU	111	2368.898	2368.174	340	20.	724	
CU	111	2109.088	2108.420	30		724		CU	111	2378.514	2377.788	5		724	
CU	111	2112.983	2112.314	15		724		CU	111	2380.317	2379.591	5		724	
CU	111	2114.410	2113.741	10		724		CU	111	2381.581	2380.855	3		724	
CU	111	2120.385	2119.715	5		724		CU	111	2382.759	2382.033	10		724	
CU	111	2129.249	2128.577	30		724		CU	111	2383.679	2382.952	5		724	
CU	111	2146.403	2145.727	5		724		CU	111	2383.797	2383.070	2		724	
CU	111	2155.112	2154.435	3		724		CU	111	2386.135	2385.408	0		724	
CU	111	2157.355	2156.677	2		724		CU	111	2386.249	2385.522	1		724	
CU	111	2157.955	2157.277	140		724		CU	111	2388.421	2387.693	5		724	
CU	111	2187.132	2186.448	2		724		CU	111	2391.438	2390.709	10		724	
CU	111	2218.459	2217.768	3		724		CU	111	2392.469	2391.739	290	20.	724	
CU	111	2245.377	2244.680	1		724		CU	111	2393.053	2392.324	2		724	
CU	111	2249.188	2248.491	6		724		CU	111	2395.192	2394.463	1		724	
CU	111	2272.430	2271.728	25		724		CU	111	2397.135	2396.405	10		724	
CU	111	2278.098	2277.395	40	20.	724		CU	111	2397.305	2396.575	0		724	
CU	111	2279.806	2279.102	10		724		CU	111	2397.428	2396.698	10		724	
CU	111	2280.120	2279.416	15	20.	724		CU	111	2401.534	2400.803	15		724	
CU	111	2300.181	2299.473	100		724		CU	111	2403.132	2402.401	10		724	
CU	111	2313.064	2312.353	12		724		CU	111	2403.777	2403.046	10		724	
CU	111	2315.815	2315.103	20		724		CU	111	2405.338	2404.606	10		724	
CU	111	2319.527	2318.815	0		724		CU	111	2406.237	2405.505	500	23.	724	
CU	111	2321.019	2320.306	100	20.	724		CU	111	2409.114	2408.381	10		724	
CU	111	2323.982	2323.268	2		724		CU	111	2410.147	2409.414	0		724	
CU	111	2324.686	2323.972	2		724		CU	111	2410.305	2409.572	3		724	
CU	111	2326.084	2325.370	5		724		CU	111	2410.680	2409.947	1		724	
CU	111	2326.213	2325.499	3		724		CU	111	2411.378	2410.645	3		724	
CU	111	2345.971	2345.253	3		724		CU	111	2412.840	2412.107	290		724	
CU	111	2346.877	2346.159	170	20.	724		CU	111	2413.072	2412.338	450	23.	724	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	III	2413.921	2413.188	2		724		CU	III	2447.484	2446.743	200		724	
CU	III	2417.977	2417.243	5		724		CU	III	2448.250	2447.508	170		724	
CU	III	2420.593	2419.858	30	23.	724		CU	III	2450.166	2449.424	10		724	
CU	III	2420.768	2420.033	15		724		CU	III	2451.436	2450.694	1		724	
CU	III	2420.823	2420.088	3		724		CU	III	2451.879	2451.137	1		724	
CU	III	2422.572	2421.836	140		724		CU	III	2452.464	2451.722	3		724	
CU	III	2423.002	2422.266	0		724		CU	III	2452.547	2451.805	50		724	
CU	III	2423.806	2423.070	2		724		CU	III	2453.256	2452.513	25		724	
CU	III	2424.238	2423.502	1		724		CU	III	2453.411	2452.668	5		724	
CU	III	2426.795	2426.058	0		724		CU	III	2453.723	2452.980	230		724	
CU	III	2428.888	2428.151	75		724		CU	III	2454.501	2453.758	8		724	
CU	III	2431.082	2430.345	170		724		CU	III	2455.055	2454.312	5		724	
CU	III	2431.263	2430.528	100		724		CU	III	2455.562	2454.819	5		724	
CU	III	2432.466	2431.728	3		724		CU	III	2457.243	2456.499	3		724	
CU	III	2433.493	2432.755	0		724		CU	III	2458.405	2457.661	30		724	
CU	III	2434.237	2433.499	3		724		CU	III	2459.435	2458.691	290		724	
CU	III	2434.742	2434.004	2		724		CU	III	2460.140	2459.396	200		724	
CU	III	2435.109	2434.370	15		724		CU	III	2461.047	2460.302	15		724	
CU	III	2435.787	2435.048	15		724		CU	III	2462.726	2461.981	170		724	
CU	III	2436.563	2435.824	230		724		CU	III	2462.993	2462.248	2		724	
CU	III	2436.846	2436.107	3		724		CU	III	2463.699	2462.954	100		724	
CU	III	2437.127	2436.388	10		724		CU	III	2463.804	2463.059	10		724	
CU	III	2437.582	2436.843	5		724		CU	III	2464.402	2463.657	5		724	
CU	III	2437.907	2437.168	10		724		CU	III	2464.605	2463.860	140		724	
CU	III	2438.221	2437.482	4		724		CU	III	2466.594	2465.848	100		724	
CU	III	2438.513	2437.774	3		724		CU	III	2467.043	2466.297	3		724	
CU	III	2438.869	2438.130	2		724		CU	III	2468.619	2467.873	25		724	
CU	III	2439.095	2438.356	10		724		CU	III	2468.937	2468.191	50		724	
CU	III	2440.009	2439.269	20		724		CU	III	2469.157	2468.411	340		724	
CU	III	2440.812	2440.072	170		724		CU	III	2469.471	2468.725	230		724	
CU	III	2441.624	2440.884	5		724		CU	III	2469.524	2468.777	10		724	
CU	III	2442.674	2441.933	15		724		CU	III	2469.733	2468.987	50		724	
CU	III	2443.322	2442.582	120		724		CU	III	2470.179	2469.433	1		724	
CU	III	2444.442	2443.701	20		724		CU	III	2472.201	2471.454	1		724	
CU	III	2444.863	2444.122	10		724		CU	III	2475.251	2474.503	3		724	
CU	III	2444.974	2444.233	200		724		CU	III	2475.864	2475.116	170		724	
CU	III	2445.180	2444.439	1000	20.	724		CU	III	2476.176	2475.428	50		724	
CU	III	2445.605	2444.864	5		724		CU	III	2478.341	2477.593	1		724	
CU	III	2446.683	2445.942	2		724		CU	III	2478.984	2478.236	290		724	
CU	III	2446.905	2446.164	15		724		CU	III	2480.378	2479.629	2		724	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	III	2481.706	2480.957	5		724		CU	III	2510.271	2509.512	15		724	
CU	III	2481.945	2481.196	15		724		CU	III	2510.443	2509.687	3		724	
CU	III	2483.107	2482.357	600	23.	724		CU	III	2511.558	2510.802	2		724	
CU	III	2483.532	2482.782	10		724		CU	III	2512.053	2511.297	170		724	
CU	III	2486.017	2485.267	3		724		CU	III	2512.894	2512.137	15		724	
CU	III	2486.108	2485.358	15		724		CU	III	2513.571	2512.815	2		724	
CU	III	2487.213	2486.463	450		724		CU	III	2513.653	2512.896	35		724	
CU	III	2487.492	2486.741	3		724		CU	III	2513.780	2513.023	50		724	
CU	III	2488.472	2487.721	35		724		CU	III	2514.505	2513.748	8		724	
CU	III	2488.982	2488.231	3		724		CU	III	2515.415	2514.658	25		724	
CU	III	2490.200	2489.449	25		724		CU	III	2515.457	2514.700	3		724	
CU	III	2491.724	2490.972	3		724		CU	III	2515.510	2514.753	10		724	
CU	III	2494.304	2493.552	25		724		CU	III	2515.601	2514.906	3		724	
CU	III	2494.900	2494.148	3		724		CU	III	2515.820	2515.063	10		724	
CU	III	2494.945	2494.193	2		724		CU	III	2516.249	2515.492	3		724	
CU	III	2496.315	2495.563	2		724		CU	III	2516.325	2515.568	5		724	
CU	III	2496.831	2496.078	260		724		CU	III	2516.586	2515.829	5		724	
CU	III	2497.715	2496.962	2		724		CU	III	2517.089	2516.331	200		724	
CU	III	2498.391	2497.638	290	23.	724		CU	III	2517.493	2516.736	3		724	
CU	III	2498.620	2497.867	10		724		CU	III	2517.623	2516.866	200		724	
CU	III	2501.450	2500.696	100		724		CU	III	2517.971	2517.214	3		724	
CU	III	2502.392	2501.638	10		724		CU	III	2518.079	2517.321	100		724	
CU	III	2502.729	2501.975	1		724		CU	III	2518.444	2517.687	15		724	
CU	III	2503.783	2503.029	75		724		CU	III	2518.870	2518.112	15		724	
CU	III	2503.934	2503.180	5		724		CU	III	2519.082	2518.324	230		724	
CU	III	2504.082	2503.327	2		724		CU	III	2519.535	2518.777	230		724	
CU	III	2504.380	2503.625	75		724		CU	III	2519.604	2518.846	75		724	
CU	III	2505.383	2504.629	140		724		CU	III	2520.246	2519.488	5		724	
CU	III	2506.364	2505.609	170		724		CU	III	2520.621	2519.863	0		724	
CU	III	2506.517	2505.762	10		724		CU	III	2520.675	2519.917	5		724	
CU	III	2507.282	2506.527	10		724		CU	III	2521.121	2520.363	35		724	
CU	III	2507.475	2506.720	120		724		CU	III	2521.753	2520.995	170		724	
CU	III	2508.207	2507.452	140		724		CU	III	2523.144	2522.385	340	29.	724	
CU	III	2508.588	2507.832	5		724		CU	III	2523.781	2523.022	260		724	
CU	III	2508.808	2508.052	120		724		CU	III	2524.013	2523.254	200		724	
CU	III	2509.243	2508.488	340		724		CU	III	2524.413	2523.654	50		724	
CU	III	2509.367	2508.612	75		724		CU	III	2524.533	2523.774	5		724	
CU	III	2509.531	2508.775	5		724		CU	III	2524.736	2523.977	15		724	
CU	III	2509.604	2508.848	50		724		CU	III	2525.003	2524.243	25		724	
CU	III	2509.721	2508.965	15		724		CU	III	2525.709	2524.950	100		724	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	III	2525.973	2525.213	25		724		CU	III	2553.437	2552.671	170		724	
CU	III	2527.515	2526.755	10		724		CU	III	2553.540	2552.774	15		724	
CU	III	2527.949	2527.189	35		724		CU	III	2553.881	2553.115	290		724	
CU	III	2528.255	2527.495	10		724		CU	III	2554.256	2553.490	10		724	
CU	III	2528.673	2527.913	3		724		CU	III	2554.478	2553.712	3		724	
CU	III	2529.312	2528.552	3		724		CU	III	2554.767	2554.000	8		724	
CU	III	2530.528	2529.768	10		724		CU	III	2555.062	2554.295	75		724	
CU	III	2530.882	2530.122	1		724		CU	III	2555.186	2554.419	120		724	
CU	III	2531.331	2530.570	5		724		CU	III	2555.751	2554.985	1		724	
CU	III	2531.629	2530.868	50		724		CU	III	2557.896	2557.129	3		724	
CU	III	2531.949	2531.188	10		724		CU	III	2558.082	2557.315	25		724	
CU	III	2532.075	2531.314	50		724		CU	III	2558.423	2557.656	15		724	
CU	III	2532.799	2532.038	200		724		CU	III	2561.228	2560.460	10		724	
CU	III	2533.102	2532.341	2		724		CU	III	2562.019	2561.251	15		724	
CU	III	2533.409	2532.648	25		724		CU	III	2562.505	2561.737	5		724	
CU	III	2533.624	2532.863	200		724		CU	III	2562.932	2562.193	5		724	
CU	III	2534.010	2533.249	3		724		CU	III	2564.944	2564.176	10		724	
CU	III	2534.069	2533.308	5		724		CU	III	2565.015	2564.247	8		724	
CU	III	2534.448	2533.686	170		724		CU	III	2565.957	2565.188	3		724	
CU	III	2535.845	2535.083	25		724		CU	III	2566.813	2566.044	10		724	
CU	III	2536.078	2535.316	290		724		CU	III	2566.912	2566.143	1		724	
CU	III	2536.727	2535.965	10		724		CU	III	2567.140	2566.371	290		724	
CU	III	2537.032	2536.270	10		724		CU	III	2567.823	2567.054	50		724	
CU	III	2539.421	2538.659	340		724		CU	III	2569.512	2568.742	8		724	
CU	III	2540.808	2540.045	10		724		CU	III	2569.835	2569.065	15		724	
CU	III	2540.916	2540.153	2		724		CU	III	2569.917	2569.147	10		724	
CU	III	2541.209	2540.446	5		724		CU	III	2570.124	2569.358	3		724	
CU	III	2544.321	2543.557	25		724		CU	III	2570.300	2569.530	20		724	
CU	III	2544.502	2543.738	3		724		CU	III	2570.493	2569.723	5		724	
CU	III	2547.361	2546.596	50		724		CU	III	2570.678	2569.908	5		724	
CU	III	2547.773	2547.008	3		724		CU	III	2570.909	2570.139	1		724	
CU	III	2548.703	2547.938	3		724		CU	III	2571.036	2570.266	3		724	
CU	III	2549.606	2548.841	10		724		CU	III	2571.742	2570.972	140		724	
CU	III	2549.836	2549.071	2		724		CU	III	2572.591	2571.820	2		724	
CU	III	2549.950	2549.185	5		724		CU	III	2573.518	2572.747	10		724	
CU	III	2550.284	2549.519	2		724		CU	III	2574.100	2573.329	290		724	
CU	III	2551.125	2550.359	170		724		CU	III	2575.594	2574.823	2		724	
CU	III	2551.654	2550.889	1		724		CU	III	2575.769	2574.998	30		724	
CU	III	2552.676	2551.910	100		724		CU	III	2575.890	2575.119	35		724	
CU	III	2552.888	2552.122	5		724		CU	III	2575.937	2575.166	1		724	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
CU	III	2576.794	2576.023	15		724		CU	III	2602.113	2601.335	10		724	
CU	III	2577.225	2576.454	3		724		CU	III	2603.488	2602.710	5		724	
CU	III	2577.353	2576.581	5		724		CU	III	2604.442	2603.664	4		724	
CU	III	2577.496	2576.724	30		724		CU	III	2605.165	2604.387	0		724	
CU	III	2578.366	2577.594	1		724		CU	III	2608.368	2607.589	0		724	
CU	III	2578.537	2577.765	35		724		CU	III	2608.423	2607.644	3		724	
CU	III	2578.984	2578.212	140		724		CU	III	2608.663	2607.884	5		724	
CU	III	2579.947	2581.173	120		724		CU	III	2609.227	2608.448	10		724	
CU	III	2580.908	2580.135	120		724		CU	III	2610.099	2609.320	340	23.	724	
CU	III	2583.037	2582.264	5		724		CU	III	2612.253	2611.473	10		724	
CU	III	2583.251	2582.478	2		724		CU	III	2620.872	2620.090	3		724	
CU	III	2584.655	2583.882	1		724		CU	III	2625.011	2624.228	20		724	
CU	III	2584.771	2584.001	15		724		CU	III	2625.899	2625.116	15		724	
CU	III	2585.662	2584.888	5		724		CU	III	2626.707	2625.924	0		724	
CU	III	2585.785	2585.012	3		724		CU	III	2627.847	2627.063	1		724	
CU	III	2586.167	2585.393	1		724		CU	III	2628.522	2627.738	10		724	
CU	III	2586.584	2585.819	10		724		CU	III	2629.275	2628.491	10		724	
CU	III	2587.143	2586.369	75		724		CU	III	2629.334	2628.550	0		724	
CU	III	2587.363	2586.589	5		724		CU	III	2630.233	2629.449	10		724	
CU	III	2588.194	2587.420	140		724		CU	III	2633.023	2632.238	5		724	
CU	III	2588.843	2588.068	10		724		CU	III	2636.453	2635.667	3		724	
CU	III	2588.933	2588.159	10		724		CU	III	2637.044	2636.258	1		724	
CU	III	2589.368	2588.594	10		724		CU	III	2637.677	2636.891	0		724	
CU	III	2590.347	2589.573	10		724		CU	III	2639.179	2638.393	1		724	
CU	III	2591.452	2590.677	15		724		CU	III	2639.512	2638.726	15		724	
CU	III	2591.877	2591.105	3		724		CU	III	2641.083	2640.297	1		724	
CU	III	2592.640	2591.864	5		724		CU	III	2642.009	2641.222	1		724	
CU	III	2593.339	2592.564	5		724		CU	III	2642.324	2641.537	50		724	
CU	III	2593.418	2592.643	3		724		CU	III	2644.711	2643.923	170	29.	724	
CU	III	2593.621	2592.846	30		724		CU	III	2646.702	2645.914	2	29.	724	
CU	III	2594.020	2593.244	2		724		CU	III	2647.171	2646.383	15		724	
CU	III	2595.146	2594.370	1		724		CU	III	2650.308	2649.519	20		724	
CU	III	2595.424	2594.648	0		724		CU	III	2652.884	2652.095	4		724	
CU	III	2597.443	2596.667	8		724		CU	III	2653.644	2652.854	3		724	
CU	III	2597.772	2596.995	3		724		CU	III	2653.865	2653.075	3		724	
CU	III	2598.108	2597.332	10		724		CU	III	2656.560	2655.769	10		724	
CU	III	2599.299	2598.522	50		724		CU	III	2657.283	2656.493	0		724	
CU	III	2600.017	2599.240	3		724		CU	III	2658.276	2657.485	3		724	
CU	III	2600.693	2599.916	1		724		CU	III	2659.105	2658.314	20		724	
CU	III	2600.760	2599.983	3		724		CU	III	2659.613	2658.822	3		724	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
F	II	2056.320	2055.662	1		538		F	II	2877.324	2876.480	150		538	
F	II	2059.174	2058.515	25		538		F	II	2884.508	2883.662	1		538	
F	II	2059.384	2058.725	40		538		F	II	2886.249	2885.403	4		538	
F	II	2158.305	2157.627	1		538		F	II	2886.963	2886.117	1		538	
F	II	2159.754	2159.076	4		538		F	II	2897.967	2897.118	1		538	
F	II	2226.2	2225.5			108	F	F	II	2905.500	2904.649	25		538	
F	II	2243.3	2242.6			108	F	F	II	2907.275	2906.424	4		538	
F	II	2263.036	2262.336	1		538		F	II	2947.173	2946.312	4		538	
F	II	2279.960	2279.256	60		538		F	II	2948.002	2947.140	1		538	
F	II	2328.823	2328.108	1		538		F	II	2974.12	2973.25	1		538	
F	II	2330.688	2329.973	40		538		F	II	2974.29	2973.42	1		538	
F	II	2330.938	2330.223	10		538		F	II	2974.642	2973.774	120		538	
F	II	2333.669	2332.974	25		538		F	II	2974.90	2974.03	1		538	
F	II	2334.513	2333.797	90		538		F	II	2975.29	2974.42	10		538	
F	II	2334.842	2334.126	60		538		F	II	2977.50	2976.63	1		538	
F	II	2335.196	2334.480	40		538		F	II	2977.91	2977.04	1		538	
F	II	2335.555	2334.839	10		538		F	II	2978.00	2977.13	1		538	
F	II	2335.660	2334.944	25		538		F	II	2978.69	2977.82	10		538	
F	II	2347.576	2346.857	25		538		F	II	2980.24	2979.37	1		538	
F	II	2347.662	2346.943	1		538		F	II	2980.97	2980.10	4		538	
F	II	2347.832	2347.113	4		538		F	II	2989.275	2988.403	150		538	
F	II	2376.40	2375.68	10		538		F	II	2989.463	2988.591	120		538	
F	II	2438.059	2437.320	4		538		F	II	2993.693	2992.820	1		538	
F	II	2466.899	2466.153	60		538		F	II	2994.320	2993.447	1		538	
F	II	2497.250	2496.497	10		538		F	II	2994.591	2993.718	4		538	
F	II	2498.497	2497.744	25		538		F	II	2994.804	2993.931	4		538	
F	II	2556.877	2556.110	250		538		F	II	2995.088	2994.143	10		538	
F	II	2574.943	2574.172	40		538		F	II	2996.134	2995.260	4		538	
F	II	2647.421	2646.633	40		538		F	II	2998.13	2997.26	10		538	
F	II	2693.546	2692.747	90		538		F	II	3001.89	3001.02	10		538	
F	II	2740.366	2739.555	25		538		F	II	3003.85	3002.98	60		538	
F	II	2784.45	2783.63	10		538		F	II	3004.93	3004.06	40		538	
F	II	2817.728	2816.899	4		538		F	II	3005.18	3004.30	10		538	
F	II	2818.152	2817.322	10		538		F	II	3005.73	3004.85	25		538	
F	II	2868.130	2867.288	150		538		F	II	3006.76	3005.88	10		538	
F	II	2872.247	2871.404	250		538		F	II	3008.76	3007.88	1		538	
F	II	2873.979	2873.136	120		538		F	II	3009.02	3008.14	4		538	
F	II	2875.052	2874.208	25		538		F	II	3009.56	3008.69	10		538	
F	II	2875.636	2874.792	200		538		F	II	3021.513	3020.630	1		538	
F	II	2876.715	2875.871	120		538		F	II	3023.17	3022.29	1		538	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
F	II	3023.47	3022.59	1		538		F	II	3207.69	3206.76	1		538	
F	II	3023.80	3022.92	1		538		F	II	3210.36	3209.43	1		538	
F	II	3024.88	3024.00	4		538		F	II	3215.439	3214.510	10		538	
F	II	3026.60	3025.72	1		538		F	II	3215.929	3215.000	25		538	
F	II	3027.53	3026.65	4		538		F	II	3229.057	3228.125	10		538	
F	II	3028.30	3027.42	1		538		F	II	3229.769	3228.837	25		538	
F	II	3057.991	3057.102	250		538		F	II	3229.909	3228.978	4		538	
F	II	3059.049	3058.160	300		538		F	II	3230.222	3229.290	10		538	
F	II	3060.881	3059.991	350		538		F	II	3231.389	3230.457	40		538	
F	II	3087.150	3086.254	120		538		F	II	3234.91	3233.97	4		538	
F	II	3087.407	3086.511	120		538		F	II	3239.03	3238.10	1		174	
F	II	3098.25	3097.35	10		538		F	II	3240.844	3239.909	40		538	
F	II	3099.00	3098.10	10		538		F	II	3265.013	3264.084	500		538	
F	II	3104.17	3103.27	4		538		F	II	3268.688	3267.747	1		538	
F	II	3107.057	3106.156	60		538		F	II	3269.093	3268.151	4		538	
F	II	3107.73	3106.83	1		538		F	II	3294.275	3293.326	1		538	
F	II	3113.10	3112.20	1		538		F	II	3295.268	3294.319	150		538	
F	II	3116.00	3115.10	10		538		F	II	3297.193	3296.244	120		538	
F	II	3117.78	3116.88	1		538		F	II	3297.487	3296.538	200		538	
F	II	3118.660	3117.756	25		538		F	II	3301.043	3300.093	150		538	
F	II	3119.572	3118.668	40		538		F	II	3302.383	3301.432	120		538	
F	II	3120.35	3119.44	10		538		F	II	3304.830	3303.879	250		538	
F	II	3120.964	3120.059	60		538		F	II	3312.592	3311.639	40		538	
F	II	3123.00	3122.09	10		538		F	II	3322.26	3321.30	10		538	
F	II	3125.046	3124.140	40		538		F	II	3325.08	3324.12	4		538	
F	II	3126.033	3125.127	25		538		F	II	3330.620	3329.662	1		538	
F	II	3126.402	3125.496	10		538		F	II	3347.388	3346.426	10		538	
F	II	3126.490	3125.584	4		538		F	II	3349.362	3348.399	25		538	
F	II	3126.656	3125.750	4		538		F	II	3373.688	3372.719	10		538	
F	II	3127.155	3126.249	1		538		F	II	3374.448	3373.479	120		538	
F	II	3148.183	3147.271	10		538		F	II	3378.389	3377.419	90		538	
F	II	3148.340	3147.428	4		538		F	II	3380.252	3379.282	60		538	
F	II	3148.437	3147.525	1		538		F	II	3383.30	3382.33	1		538	
F	II	3148.869	3147.957	200		538		F	II	3393.122	3392.148	25		538	
F	II	3154.406	3153.493	500		538		F	II	3394.38	3393.40	4		174	
F	II	3163.278	3162.363	25		538		F	II	3394.843	3393.869	90		538	
F	II	3202.068	3201.143	25		538		F	II	3395.227	3394.253	40		538	
F	II	3203.684	3202.759	700	8.	538		F	II	3396.563	3395.588	40		538	
F	II	3204.16	3203.24	1		538		F	II	3396.886	3395.911	25		538	
F	II	3204.57	3203.65	1		538		F	II	3397.444	3396.469	40		538	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
F	III	2421.126	2420.391	110		537		F	III	2543.534	2542.770	450		537	
F	III	2423.498	2422.760	150		537		F	III	2544.121	2543.357	150		537	
F	III	2423.652	2422.916	110		537		F	III	2544.533	2543.769	110		537	
F	III	2427.001	2426.264	150		537		F	III	2545.419	2544.655	300		537	
F	III	2434.680	2433.942	110		537		F	III	2546.935	2546.171	300		537	
F	III	2434.843	2434.105	250		537		F	III	2550.378	2549.613	250		537	
F	III	2436.964	2436.225	30		537		F	III	2551.588	2550.823	200		537	
F	III	2442.345	2441.605	375		537		F	III	2552.831	2552.065	150		537	
F	III	2443.796	2443.055	12		537		F	III	2563.193	2562.425	300		537	
F	III	2450.280	2449.538	200		537		F	III	2571.00	2570.23	80		537	
F	III	2452.813	2452.070	450		537		F	III	2571.711	2570.941	300		537	
F	III	2456.531	2455.788	50		537		F	III	2574.391	2573.620	300		537	
F	III	2463.250	2462.475	50		537		F	III	2577.979	2577.207	150		537	
F	III	2465.595	2464.850	520		537		F	III	2580.269	2579.497	30		537	
F	III	2468.002	2467.256	4		537		F	III	2580.672	2579.900	300		537	
F	III	2471.038	2470.291	520		537		F	III	2580.810	2580.038	450		537	
F	III	2471.233	2470.486	200		537		F	III	2584.578	2583.805	520		537	
F	III	2471.806	2471.059	30		537		F	III	2587.427	2586.653	12		537	
F	III	2476.157	2475.409	12		537		F	III	2589.847	2589.072	30		537	
F	III	2479.481	2478.732	450		537		F	III	2593.361	2592.527	1		537	
F	III	2482.910	2482.160	4		537		F	III	2593.496	2592.695	1		537	
F	III	2485.115	2484.365	700		537		F	III	2593.596	2592.821	375		537	
F	III	2487.572	2486.822	12		537		F	III	2594.005	2593.229	450		537	
F	III	2489.111	2488.360	4		537		F	III	2596.310	2595.534	520		537	
F	III	2493.303	2492.551	50		537		F	III	2597.323	2596.547	150		537	
F	III	2506.295	2505.540	12		537		F	III	2600.059	2599.282	600		537	
F	III	2511.856	2511.100	110		537		F	III	2601.342	2600.565	300		537	
F	III	2516.333	2515.576	300		537		F	III	2602.505	2601.728	4		537	
F	III	2517.818	2517.060	250		537		F	III	2603.708	2602.930	80		537	
F	III	2522.343	2521.584	200		537		F	III	2606.840	2606.061	375		537	
F	III	2523.535	2522.776	30		537		F	III	2611.697	2610.917	150		537	
F	III	2523.96	2523.20	4		537		F	III	2613.880	2613.100	375		537	
F	III	2527.068	2526.308	4		537		F	III	2614.238	2613.458	110		537	
F	III	2528.223	2527.463	12		537		F	III	2617.73	2616.95	4		537	
F	III	2531.409	2530.648	200		537		F	III	2618.166	2617.385	80		537	
F	III	2533.323	2532.562	4		537		F	III	2624.570	2623.787	150		537	
F	III	2534.409	2533.648	250		537		F	III	2625.795	2625.012	520		537	
F	III	2537.829	2537.067	50		537		F	III	2627.949	2627.165	80		537	
F	III	2540.328	2539.565	110		537		F	III	2628.231	2627.447	30		537	
F	III	2541.025	2540.262	150		537		F	III	2630.484	2629.700	600		537	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
F	III	2631.118	2630.334	150	537		F	III	2728.767	2727.959	200	537	
F	III	2631.717	2630.933	300	537		F	III	2733.353	2732.544	50	537	
F	III	2635.618	2634.833	110	537		F	III	2733.732	2732.923	12	537	
F	III	2639.803	2639.017	300	537		F	III	2734.584	2733.775	80	537	
F	III	2640.173	2639.387	250	537		F	III	2738.040	2737.230	50	537	
F	III	2641.951	2641.164	200	537		F	III	2738.785	2737.975	300	537	
F	III	2646.000	2645.212	50	537		F	III	2739.913	2739.102	150	537	
F	III	2648.237	2647.449	80	537		F	III	2741.095	2740.284	150	537	
F	III	2649.789	2649.000	110	537		F	III	2744.40	2743.59	30	537	
F	III	2652.266	2651.477	200	537		F	III	2746.347	2745.535	80	537	
F	III	2652.465	2651.676	250	537		F	III	2748.694	2747.882	375	537	
F	III	2652.721	2651.932	150	537		F	III	2750.12	2749.30	4	537	
F	III	2653.991	2653.201	110	537		F	III	2751.742	2750.929	12	537	
F	III	2654.242	2653.452	300	537		F	III	2752.582	2751.769	150	537	
F	III	2654.528	2653.738	375	537		F	III	2753.623	2752.809	110	537	
F	III	2655.757	2654.967	80	537		F	III	2754.06	2753.25	30	537	
F	III	2656.779	2655.989	80	537		F	III	2756.121	2755.307	300	537	
F	III	2657.061	2656.270	250	537		F	III	2756.364	2755.550	520	537	
F	III	2657.233	2656.442	450	537		F	III	2757.491	2756.676	375	537	
F	III	2660.367	2659.576	50	537		F	III	2760.444	2759.629	800	537	
F	III	2665.123	2664.331	300	537		F	III	2760.654	2759.839	250	537	
F	III	2665.702	2664.910	50	537		F	III	2777.720	2776.900	30	537	
F	III	2666.502	2665.709	30	537		F	III	2779.428	2778.608	30	537	
F	III	2668.991	2668.198	200	537		F	III	2782.211	2781.390	375	537	
F	III	2669.167	2668.374	110	537		F	III	2782.814	2781.993	300	537	
F	III	2672.076	2671.282	50	537		F	III	2784.130	2783.309	50	537	
F	III	2675.325	2674.530	150	537		F	III	2787.248	2786.426	50	537	
F	III	2676.186	2675.391	110	537		F	III	2788.285	2787.463	110	537	
F	III	2678.213	2677.417	110	537		F	III	2788.538	2787.716	150	537	
F	III	2682.493	2681.696	80	537		F	III	2788.967	2788.145	450	537	
F	III	2709.158	2708.355	50	537		F	III	2790.186	2789.363	250	537	
F	III	2710.211	2709.408	250	537		F	III	2794.045	2793.221	200	537	
F	III	2717.900	2717.095	80	537		F	III	2794.434	2793.610	50	537	
F	III	2718.940	2718.135	200	537		F	III	2804.860	2804.034	80	537	
F	III	2720.676	2719.870	150	537		F	III	2812.273	2811.445	800	537	
F	III	2723.039	2722.233	12	537		F	III	2819.158	2818.328	375	537	
F	III	2724.021	2723.214	110	537		F	III	2834.818	2833.985	600	537	
F	III	2724.807	2724.000	110	537		F	III	2836.463	2835.629	700	537	
F	III	2726.629	2725.822	200	537		F	III	2858.015	2857.176	50	537	
F	III	2728.123	2727.315	80	537		F	III	2861.166	2860.326	700	537	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
F	III	2863.703	2862.862	450	537		F	III	3002.776	3001.901	250	537	
F	III	2866.521	2865.680	300	537		F	III	3003.946	3003.070	200	537	
F	III	2870.11	2869.27	1	537		F	III	3009.588	3008.711	12	537	
F	III	2870.841	2869.999	250	537		F	III	3016.275	3015.396	30	537	
F	III	2876.17	2875.33	1	537		F	III	3035.408	3034.525	300	3.	537
F	III	2878.144	2877.300	12	537		F	III	3040.134	3039.250	520	3.	537
F	III	2880.75	2879.90	30	537		F	III	3040.630	3039.746	450	3.	537
F	III	2883.71	2882.86	12	537		F	III	3043.687	3042.802	800		537
F	III	2886.96	2886.12	1	537		F	III	3049.743	3048.856	200		537
F	III	2888.422	2887.575	600	537		F	III	3050.026	3049.139	700		537
F	III	2890.297	2889.450	700	537		F	III	3067.621	3066.730	200		537
F	III	2896.320	2895.471	375	537		F	III	3114.519	3113.616	600	1.	537
F	III	2903.05	2902.20	4	537		F	III	3116.602	3115.698	800	1.	537
F	III	2906.152	2905.301	450	537		F	III	3122.445	3121.540	1000	1.	537
F	III	2906.54	2905.69	4	537		F	III	3125.694	3124.788	600	1.	537
F	III	2908.63	2907.77	12	537		F	III	3135.141	3134.233	600	1.	537
F	III	2912.63	2911.78	4	537		F	III	3143.679	3142.769	250	4.	537
F	III	2914.138	2913.285	600	537		F	III	3146.449	3145.538	300	1.	537
F	III	2917.198	2916.344	800	537		F	III	3147.898	3146.987	600	1.	537
F	III	2921.373	2920.518	375	537		F	III	3155.325	3154.412	300	4.	537
F	III	2921.763	2920.908	300	537		F	III	3157.041	3156.127	50	4.	537
F	III	2929.167	2928.310	12	537		F	III	3166.799	3165.883	200	1.	537
F	III	2933.343	2932.485	600	537		F	III	3175.089	3174.170	1000	2.	537
F	III	2942.742	2941.882	12	537		F	III	3175.682	3174.764	900	2.	537
F	III	2948.108	2947.246	110	537		F	III	3186.081	3185.160	12		537
F	III	2950.746	2949.884	150	537		F	III	3210.065	3209.138	30		537
F	III	2955.201	2954.338	80	537		F	III	3214.932	3214.003	450	2.	537
F	III	2955.988	2955.124	200	537		F	III	3226.175	3225.244	4		537
F	III	2960.527	2959.662	200	537		F	III	3237.583	3236.649	4		537
F	III	2962.481	2961.616	375	537		F	III	3249.91	3248.97	4		537
F	III	2967.760	2966.894	150	537		F	III	3253.870	3252.931	12		537
F	III	2979.019	2978.150	300	537		F	III	3270.59	3269.65	4		537
F	III	2981.480	2980.610	12	537		F	III	3355.329	3354.365	150		537
F	III	2985.353	2984.482	375	537		F	III	3356.946	3355.982	200		537
F	III	2987.041	2986.170	30	537		F	III	3358.795	3357.830	110		537
F	III	2995.156	2994.283	600	537		F	III	3359.323	3358.358	250		537
F	III	2998.082	2997.208	1	537		F	III	3368.614	3367.647	110		537
F	III	2998.399	2997.525	520	537		F	III	3373.194	3372.225	110		537
F	III	3000.347	2999.472	450	537		F	III	3402.614	3401.638	150		537
F	III	3000.971	3000.096	300	537		F	III	3412.672	3411.693	E		537

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
F	IV	2555.23	2554.47	4		173	
F	IV	2556.36	2555.59	0		173	
F	IV	2558.70	2557.93	10		173	
F	IV	2626.29	2625.51	1		173	
F	IV	2627.52	2626.74	10		173	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	I	2107.0626	2106.3946	10	33.	896		FE	I	2123.789	2123.118	0		378	
FE	I	2108.8047	2108.1365	12	28.	389		FE	I	2125.165	2124.494	0	81.	378	
FE	I	2108.859	2108.188	1	32.	605		FE	I	2126.887	2126.212	1	27.	605	
FE	I	2108.9701	2108.3019	12	34.	389		FE	I	2128.139	2127.467	1	28.	378	
FE	I	2109.6274	2108.9591	10	33.	896		FE	I	2128.535	2127.863	2		378	
FE	I	2110.529	2109.861	25		605	N	FE	I	2131.092	2130.417	1	83.	605	
FE	I	2110.9040	2110.2354	8	31.	896		FE	I	2131.637	2130.964	4		896	M
FE	I	2111.889	2111.720	0	31.	378		FE	I	2132.6899	2132.0167	10	25.	896	
FE	I	2111.942	2111.274	20		605	N	FE	I	2133.987	2133.311	1	81.	605	
FE	I	2113.6379	2112.9688	25	33.	389		FE	I	2136.622	2135.948	2		896	M
FE	I	2113.7561	2113.0869	20	81.	389		FE	I	2139.2668	2138.5924	4	24.	896	
FE	I	2115.2691	2114.5997	25	33.	389		FE	I	2140.3727	2139.6980	15	24.	896	
FE	I	2115.8388	2115.1693	20	33.	389		FE	I	2140.413	2139.738	3		896	M
FE	I	2119.8066	2119.1362	5	28.	389		FE	I	2140.6094	2139.9349	2	29.	896	
FE	I	2122.863	2122.188	1	26.	605		FE	I	2141.761	2141.083	1	26.	605	
								FE	I	2142.146	2141.471	3		378	
								FE	I	2142.3931	2141.7180	6	25.	896	
								FE	I	2142.818	2142.141	1	30.	605	
								FE	I	2144.567	2143.892	3		378	
								FE	I	2145.254	2144.576	1	81.	605	
								FE	I	2145.8649	2145.1891	12	27.	896	
								FE	I	2147.389	2146.710	2	27.	605	
								FE	I	2147.721	2147.045	2		896	M
								FE	I	2149.073	2148.394	1	29.	605	
								FE	I	2149.849	2149.170	1	80.	605	
								FE	I	2150.095	2149.416	1	81.	605	
								FE	I	2150.296	2149.620	1		378	
								FE	I	2150.8610	2150.1844	5	25.	896	
								FE	I	2151.778	2151.099	3	25.	605	
								FE	I	2152.372	2151.695	10		896	M
								FE	I	2153.6839	2153.0065	15	27.	896	
								FE	I	2154.805	2154.127	3		378	
								FE	I	2155.138	2154.458	2	77.	605	
								FE	I	2155.6972	2155.0197	4	25.	896	
								FE	I	2155.792	2155.114	0		378	
								FE	I	2155.918	2155.238	2	27.	605	
								FE	I	2156.494	2155.816	3		378	
								FE	I	2157.182	2156.504	3		378	
								FE	I	2158.4727	2157.7943	50	24.	896	
								FE	I	2159.2123	2158.5341	15	27.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2159.3079	2158.6296	5	23.	896		FE	I	2185.14	2184.46	1		378	
FE	I	2159.4128	2158.7345	2	25.	896		FE	I	2185.900	2185.216	0		378	
FE	I	2159.5985	2158.9202	5	24.	896		FE	I	2186.9340	2186.2500	6	20.	896	
FE	I	2159.671	2158.993	1		378		FE	I	2187.1702	2186.4862	155	21.	896	
FE	I	2160.1097	2159.4313	3	27.	896		FE	I	2187.5766	2186.8922	60	22.	896	
FE	I	2160.317	2159.638	3		896	M	FE	I	2187.8787	2187.1946	110	21.	896	
FE	I	2160.3360	2159.6575	5	24.	896		FE	I	2189.870	2189.183	1	114.	605	
FE	I	2160.5142	2159.8357	5	78.	896		FE	I	2190.080	2189.393	1	78.	605	
FE	I	2160.590	2159.881	3		896	M	FE	I	2190.405	2189.720	1		378	
FE	I	2160.6024	2159.9239	6	24.	896		FE	I	2191.564	2190.879	3		378	
FE	I	2160.917	2160.236	1	82.	605		FE	I	2191.8893	2191.2043	25	22.	896	
FE	I	2162.2583	2161.5792	15	27.	896		FE	I	2192.5242	2191.8391	155	21.	896	
FE	I	2162.927	2162.248	8		896	M	FE	I	2193.504	2192.819	3		378	
FE	I	2164.047	2163.368	10		605	N	FE	I	2194.099	2193.411	2	76.	605	
FE	I	2164.542	2163.860	6	24.	605		FE	I	2194.252	2193.564	2	114.	605	
FE	I	2165.2283	2164.5486	30	24.	896		FE	I	2196.7281	2196.0429	125	21.	896	
FE	I	2166.432	2165.752	30		896	M	FE	I	2197.919	2197.230	1	20.	605	
FE	I	2166.541	2165.861	20		605	N	FE	I	2201.0769	2200.3900	80	21.	896	
FE	I	2166.662	2165.982	3		378		FE	I	2201.4113	2200.7243	80	21.	896	
FE	I	2167.267	2166.587	15		896	M	FE	I	2201.806	2201.117	4	20.	605	
FE	I	2167.4526	2166.7727	40	21.	896		FE	I	2206.771	2206.083	5		896	M
FE	I	2167.951	2167.271	1	78.	378		FE	I	2207.7567	2207.0684	4	19.	896	
FE	I	2171.235	2170.554	3		378		FE	I	2209.403	2209.714	1	20.	378	
FE	I	2171.9779	2171.2968	30	24.	896		FE	I	2211.3778	2210.6887	8	18.	896	
FE	I	2172.8236	2172.1443	2	23.	896		FE	I	2211.925	2211.234	7	20.	605	
FE	I	2172.902	2172.221	1		378		FE	I	2218.270	2217.578	1	114.	605	
FE	I	2173.013	2172.332	0	82.	378		FE	I	2218.437	2217.744	1	20.	605	
FE	I	2173.2662	2172.5851	15	23.	896		FE	I	2221.605	2220.912	2	19.	605	
FE	I	2173.8951	2173.2136	25	24.	896		FE	I	2222.751	2222.059	2	114.	378	
FE	I	2174.824	2174.142	0		378		FE	I	2223.45	2222.75	7	113.	605	
FE	I	2177.080	2176.396	1	79.	605		FE	I	2228.8643	2228.1715	12	18.	896	
FE	I	2177.5226	2176.8404	20	23.	896		FE	I	2229.184	2228.489	1	19.	605	
FE	I	2178.3768	2177.6946	5	80.	896		FE	I	2229.7658	2229.0728	2	18.	896	
FE	I	2178.757	2178.073	35	21.	605		FE	I	2231.783	2231.090	2	112.	378	
FE	I	2178.8007	2178.1182	170	22.	896		FE	I	2231.9065	2231.2128	15	18.	896	
FE	I	2179.479	2178.797	2		378		FE	I	2235.128	2234.432	2	114.	605	
FE	I	2181.5514	2180.8686	15	23.	896		FE	I	2238.511	2237.814	2	114.	605	
FE	I	2181.818	2181.133	1	20.	605		FE	I	2238.956	2238.259	2	18.	605	
FE	I	2184.151	2183.465	1	23.	605		FE	I	2241.324	2240.627	4	112.	605	
FE	I	2184.4797	2183.7963	8		896		FE	I	2242.55	2241.85	1	75.	605	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	I	2243.2677	2242.5718	15	18.	389		FE	I	2277.8087	2277.1054	15	71.	896	
FE	I	2244.609	2243.911	1	16.	605		FE	I	2278.3707	2277.6673	20	70.	896	
FE	I	2244.940	2244.244	60		896	M	FE	I	2279.319	2278.614	2	16.	605	
FE	I	2245.84	2245.14	1	75.	605		FE	I	2279.856	2279.152	2		378	
FE	I	2246.275	2245.578	25		896	M	FE	I	2280.6407	2279.9368	80	16.	896	
FE	I	2246.3494	2245.6527	10	18.	896		FE	I	2280.9198	2280.2158	12	70.	896	
FE	I	2248.160	2247.461	1	72.	605		FE	I	2282.333	2281.629	2	112.	378	
FE	I	2249.5574	2248.8602	20	70.	896		FE	I	2282.37	2281.66	1	110.	605	
FE	I	2251.134	2250.437	50		896	M	FE	I	2282.692	2281.986	1	17.	605	
FE	I	2251.4880	2250.7904	50	16.	896		FE	I	2283.5693	2282.8647	5	70.	896	
FE	I	2252.5717	2251.8739	60	18.	896		FE	I	2283.7789	2283.0743	8	71.	896	
FE	I	2256.5634	2255.8647	20	73.	896		FE	I	2284.0099	2283.3053	20	16.	896	
FE	I	2256.762	2256.063	3	75.	378		FE	I	2284.3599	2283.6551	30	16.	896	
FE	I	2257.450	2256.750	1	112.	605		FE	I	2284.7905	2284.0857	125	14.	896	
FE	I	2259.980	2259.279	1	16.	605		FE	I	2287.147	2286.442	3		378	
FE	I	2260.2101	2259.5106	170	15.	896		FE	I	2287.9553	2287.2498	125	14.	896	
FE	I	2261.295	2260.594	2	112.	605		FE	I	2288.168	2287.462	3		378	
FE	I	2261.561	2260.860	12	73.	605		FE	I	2288.3365	2287.6309	40	71.	896	
FE	I	2264.178	2263.476	6	15.	605		FE	I	2289.314	2288.608	1	72.	378	
FE	I	2265.0898	2264.3893	60	71.	896		FE	I	2289.7425	2289.0366	20	70.	896	
FE	I	2265.7550	2265.0543	40	16.	896		FE	I	2290.7724	2290.0663	10	70.	896	
FE	I	2266.31	2265.61	1	73.	605		FE	I	2291.2595	2290.5533	25	71.	896	
FE	I	2267.6074	2266.9063	15	70.	896		FE	I	2291.4811	2290.7748	10	70.	896	
FE	I	2267.7859	2267.0847	80	17.	896		FE	I	2291.613	2290.907	3		378	
FE	I	2268.1707	2267.4695	80	70.	896		FE	I	2291.8256	2291.1193	40	70.	896	
FE	I	2269.8016	2269.1000	15	16.	896		FE	I	2292.3331	2291.6267	8	17.	896	
FE	I	2271.070	2270.368	1	72.	378		FE	I	2292.706	2291.999	20		896	M
FE	I	2271.377	2270.675	3		378		FE	I	2293.2306	2292.5240	170	15.	896	
FE	I	2271.5638	2270.8619	50	15.	896		FE	I	2293.50	2292.79	1	74.	605	
FE	I	2272.4848	2271.7827	30	70.	896		FE	I	2293.535	2292.828	30		896	M
FE	I	2272.7718	2272.0696	125	16.	896		FE	I	2294.5548	2293.8478	25	15.	896	
FE	I	2273.312	2272.610	3		378		FE	I	2294.807	2294.100	3		378	
FE	I	2273.5212	2272.8188	30	71.	896		FE	I	2295.1149	2294.4078	80	14.	896	
FE	I	2274.596	2273.893	1	73.	378		FE	I	2296.017	2295.310	1		378	
FE	I	2274.7919	2274.0893	30	16.	896		FE	I	2296.244	2295.535	1	109.	605	
FE	I	2275.8946	2275.1917	12	16.	896		FE	I	2296.895	2296.188	2	111.	378	
FE	I	2276.3002	2275.5972	10	111.	896		FE	I	2297.598	2296.890	15		896	M
FE	I	2276.379	2275.676	1	111.	378		FE	I	2297.6345	2296.9269	25	14.	896	
FE	I	2276.461	2275.758	3		378		FE	I	2298.171	2297.463	8		896	M
FE	I	2276.7289	2276.0258	125	14.	896		FE	I	2298.4948	2297.7870	140	14.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2298.8772	2298.1693	240	14.	896		FE	I	2318.899	2318.187	6		896	M
FE	I	2299.3682	2298.6602	20	15.	896		FE	I	2320.748	2320.035	15		896	M
FE	I	2299.9283	2299.2201	80	14.	896		FE	I	2321.0707	2320.3579	140	14.	896	
FE	I	2300.162	2299.453	1	71.	605		FE	I	2321.118	2320.405	10		896	M
FE	I	2300.459	2299.751	4		896	M	FE	I	2321.956	2321.243	6		896	M
FE	I	2300.8499	2300.1416	170	15.	896		FE	I	2322.21	2321.50	8		896	M
FE	I	2301.232	2300.524	4		896	M	FE	I	2322.468	2321.755	15		896	M
FE	I	2301.309	2300.599	1	108.	605		FE	I	2323.654	2322.941	10		896	M
FE	I	2301.884	2301.175	100		896	M	FE	I	2323.727	2323.014	8		896	M
FE	I	2302.276	2301.567	4		896	M	FE	I	2323.900	2323.187	8		896	M
FE	I	2302.310	2301.601	4		896	M	FE	I	2324.085	2323.372	6		896	M
FE	I	2302.3925	2301.6839	50	14.	896		FE	I	2324.135	2323.422	6		896	M
FE	I	2302.674	2301.965	4		896	M	FE	I	2324.340	2323.627	1	12.	378	
FE	I	2304.1334	2303.4244	100	15.	896		FE	I	2324.841	2324.128	6		896	M
FE	I	2304.2900	2303.5810	125	15.	896		FE	I	2324.915	2324.202	8		896	M
FE	I	2304.916	2304.207	4		896	M	FE	I	2325.127	2324.414	6		896	M
FE	I	2305.4429	2304.7336	12	71.	896		FE	I	2325.293	2324.580	8		896	M
FE	I	2306.8812	2306.1716	6	71.	896		FE	I	2325.529	2324.816	8		896	M
FE	I	2307.0920	2306.3823	15	111.	896		FE	I	2325.748	2325.035	10		896	M
FE	I	2307.377	2306.667	6		896	M	FE	I	2326.351	2325.638	6		896	M
FE	I	2307.566	2306.856	5		896	M	FE	I	2326.429	2325.715	10		896	M
FE	I	2307.787	2307.077	6		896	M	FE	I	2326.477	2325.764	6		896	M
FE	I	2309.087	2308.377	6		896	M	FE	I	2326.870	2326.157	6		896	M
FE	I	2309.7093	2308.9990	110	14.	896		FE	I	2326.935	2326.221	6		896	M
FE	I	2310.153	2309.442	8		896	M	FE	I	2327.075	2326.362	6		896	M
FE	I	2310.877	2310.166	6		896	M	FE	I	2327.484	2326.770	6		896	M
FE	I	2310.971	2310.260	6		896	M	FE	I	2327.524	2326.810	6		896	M
FE	I	2313.026	2312.315	5		896	M	FE	I	2329.463	2328.749	10		896	M
FE	I	2313.322	2312.611	6		896	M	FE	I	2330.3554	2329.6406	5	12.	896	
FE	I	2313.8153	2313.1041	125	14.	896		FE	I	2330.707	2329.992	15		896	M
FE	I	2313.901	2313.190	10		896	M	FE	I	2331.803	2331.088	1	108.	378	
FE	I	2313.973	2313.262	5		896	M	FE	I	2331.827	2331.112	6		896	M
FE	I	2314.276	2313.564	6		896	M	FE	I	2331.888	2331.172	8		896	M
FE	I	2315.413	2314.701	10		896	M	FE	I	2332.957	2332.241	5		896	M
FE	I	2316.441	2315.729	8		896	M	FE	I	2333.948	2333.232	15		896	M
FE	I	2317.224	2316.512	6		896	M	FE	I	2335.037	2334.321	8		896	M
FE	I	2317.623	2316.911	10		896	M	FE	I	2335.442	2334.726	12		896	M
FE	I	2318.308	2317.596	8		896	M	FE	I	2335.741	2335.024	6		896	M
FE	I	2318.6105	2317.8983	8	111.	896		FE	I	2336.418	2335.702	8		896	M
FE	I	2318.863	2318.151	8		896	M	FE	I	2338.479	2337.762	4		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2338.864	2338.147	6		896	M	FE	I	2366.233	2365.509	1	107.	605	
FE	I	2340.226	2339.508	4		896	M	FE	I	2368.117	2367.394	0		378	
FE	I	2340.362	2339.645	40		896	M	FE	I	2369.653	2368.929	10		896	M
FE	I	2340.600	2339.882	10		896	M	FE	I	2370.1795	2369.4558	80	11.	896	
FE	I	2342.170	2341.452	25		896	M	FE	I	2370.4510	2369.7272	60		896	M
FE	I	2342.293	2341.575	1	13.	605		FE	I	2370.501	2369.777	20		896	M
FE	I	2342.366	2341.648	15		896	M	FE	I	2370.639	2369.915	10		896	M
FE	I	2343.026	2342.309	5		896	M	FE	I	2371.498	2370.774	12		896	M
FE	I	2343.606	2342.888	10		896	M	FE	I	2371.634	2370.909	4		896	M
FE	I	2344.025	2343.307	25		896	M	FE	I	2372.1547	2371.4305	110	11.	896	
FE	I	2344.872	2344.154	25		896	M	FE	I	2374.3492	2373.6245	170	11.	896	
FE	I	2345.320	2344.602	30		896	M	FE	I	2374.531	2373.806	8		896	M
FE	I	2345.736	2345.018	1		378		FE	I	2374.810	2374.085	6		896	M
FE	I	2346.287	2345.568	15		896	M	FE	I	2374.972	2374.247	8		896	M
FE	I	2347.022	2346.304	1	12.	378		FE	I	2375.2430	2374.5182	110	11.	896	
FE	I	2347.072	2346.354	25		896	M	FE	I	2375.720	2374.995	20		896	M
FE	I	2347.334	2346.615	30		896	M	FE	I	2376.403	2375.678	0		378	
FE	I	2347.400	2346.681	12		896	M	FE	I	2377.697	2376.971	0		378	
FE	I	2348.497	2347.778	10		896	M	FE	I	2378.617	2377.891	6	107.	896	
FE	I	2349.988	2349.268	30		896	M	FE	I	2378.718	2377.991	2	107.	605	
FE	I	2350.967	2350.247	15		896	M	FE	I	2379.330	2378.604	1		378	
FE	I	2351.1302	2350.4107	8	11.	896		FE	I	2379.546	2378.820	10		896	M
FE	I	2351.346	2350.626	1		378		FE	I	2381.601	2380.875	15		896	M
FE	I	2352.327	2351.607	6		896	M	FE	I	2382.5611	2381.8346	125	11.	896	
FE	I	2352.604	2351.884	1	12.	378		FE	I	2385.1496	2384.4225	100		896	M
FE	I	2354.328	2353.607	40		896	M	FE	I	2385.275	2384.548	20		896	M
FE	I	2356.0545	2355.3340	40	11.	896		FE	I	2386.307	2385.580	1		378	
FE	I	2356.637	2355.915	1	12.	605		FE	I	2386.6	2385.9	1	69.	605	
FE	I	2356.917	2356.196	1		378		FE	I	2387.944	2387.216	5		896	M
FE	I	2357.769	2357.048	10		896	M	FE	I	2388.236	2387.508	8		896	M
FE	I	2359.488	2358.767	6		896	M	FE	I	2388.558	2387.830	1	67.	378	
FE	I	2359.605	2358.884	20		896	M	FE	I	2390.7012	2389.9728	140	11.	896	
FE	I	2359.673	2358.951	50		896	M	FE	I	2392.555	2391.826	1		378	
FE	I	2361.133	2360.411	30		896	M	FE	I	2392.8787	2392.1499	25		896	M
FE	I	2361.731	2361.009	12		896	M	FE	I	2393.823	2393.094	1	66.	378	
FE	I	2362.658	2361.936	1		378		FE	I	2394.787	2394.058	0		378	
FE	I	2363.346	2362.624	1		378		FE	I	2395.562	2394.832	8		896	M
FE	I	2365.433	2364.710	12		896	M	FE	I	2396.8311	2396.1014	20		896	M
FE	I	2365.631	2364.908	10		896	M	FE	I	2398.946	2398.215	1	106.	605	
FE	I	2366.017	2365.294	10		896	M	FE	I	2401.867	2401.136	1		378	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2405.247	2404.515	15		896	M	FE	I	2438.390	2437.650	5		896	M
FE	I	2407.920	2407.188	8		896	M	FE	I	2438.9212	2438.1819	60	62.	896	
FE	I	2408.259	2407.527	4		896	M	FE	I	2439.910	2439.170	10	64.	896	
FE	I	2408.7780	2408.0456	4	67.	896		FE	I	2440.370	2439.630	15		896	
FE	I	2408.7947	2408.0623	4	68.	896		FE	I	2440.484	2439.744	125	157.	896	
FE	I	2412.291	2411.558	1		378		FE	I	2440.849	2440.109	80	157.	896	
FE	I	2412.701	2411.968	1	67.	378		FE	I	2441.325	2440.585	12		896	M
FE	I	2412.906	2412.172	0		378		FE	I	2441.487	2440.748	15		896	M
FE	I	2413.500	2412.766	1	64.	378		FE	I	2442.871	2442.130	20		896	M
FE	I	2415.052	2414.318	0	68.	378		FE	I	2443.307	2442.567	100	157.	896	
FE	I	2416.814	2416.080	5		896	M	FE	I	2444.6127	2443.8721	155	63.	896	
FE	I	2417.525	2416.791	10		896	M	FE	I	2445.646	2444.905	1		378	
FE	I	2418.223	2417.490	5	105.	896		FE	I	2445.9534	2445.2125	50	63.	896	
FE	I	2418.556	2417.821	10		896	M	FE	I	2447.062	2446.321	10		896	M
FE	I	2418.763	2418.029	5		896	M	FE	I	2448.4508	2447.7093	60	9.	896	
FE	I	2419.739	2419.004	4		896	M	FE	I	2449.311	2448.570	0		378	
FE	I	2419.7978	2419.0629	5	66.	896		FE	I	2450.332	2449.590	8		896	M
FE	I	2420.6135	2419.8784	5	68.	896		FE	I	2451.186	2450.444	12		896	
FE	I	2420.913	2420.178	5		896	M	FE	I	2452.127	2451.384	2		378	
FE	I	2421.1313	2420.3961	60	64.	896		FE	I	2452.418	2451.675	20		896	
FE	I	2423.521	2422.785	8		896	M	FE	I	2452.882	2452.139	12		896	M
FE	I	2423.8251	2423.0893	60	67.	896		FE	I	2452.914	2452.172	2	105.	378	
FE	I	2423.8420	2423.1062	8	68.	896		FE	I	2453.088	2452.345	1		378	
FE	I	2426.374	2425.638	20		896	M	FE	I	2453.333	2452.590	6	157.	896	
FE	I	2426.814	2426.077	12		896	M	FE	I	2454.2185	2453.4756	100	62.	896	
FE	I	2427.050	2426.313	1		378		FE	I	2454.311	2453.568	3	157.	378	
FE	I	2429.378	2428.641	5		896	M	FE	I	2456.311	2455.567	20		896	M
FE	I	2430.169	2429.431	1	68.	378		FE	I	2456.435	2455.692	15		896	M
FE	I	2430.5524	2429.8150	10	68.	896		FE	I	2456.932	2456.189	40		896	M
FE	I	2430.929	2430.192	2	157.	378		FE	I	2457.447	2456.704	1	106.	378	
FE	I	2431.170	2430.433	6		896	M	FE	I	2458.083	2457.340	10		896	M
FE	I	2431.578	2430.838	5		896	M	FE	I	2458.3416	2457.5978	380	62.	896	
FE	I	2431.762	2431.025	20		605	N	FE	I	2459.3118	2458.5678	25	59.	896	
FE	I	2432.768	2432.030	8		896	M	FE	I	2460.813	2460.069	1		378	
FE	I	2433.070	2432.332	1	106.	378		FE	I	2461.043	2460.299	10		896	
FE	I	2433.140	2432.402	0	34.	378		FE	I	2461.803	2461.059	25		896	M
FE	I	2433.794	2433.056	2	68.	378		FE	I	2462.879	2462.134	10		896	M
FE	I	2436.609	2435.870	15		896	M	FE	I	2462.9257	2462.1808	100	9.	896	
FE	I	2437.085	2436.346	20		896	M	FE	I	2463.3921	2462.6472	380	9.	896	
FE	I	2437.942	2437.203	15		896	M	FE	I	2463.712	2462.967	40		896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2463.904	2463.159	15		896	M	FE	I	2484.119	2483.369	15		896	M
FE	I	2464.4756	2463.7304	50	65.	896		FE	I	2484.2829	2483.5332	170	62.	896	
FE	I	2465.8942	2465.1487	280	62.	896		FE	I	2484.413	2483.663	10		896	M
FE	I	2466.411	2465.666	15		896	M	FE	I	2484.536	2483.786	20		896	M
FE	I	2466.621	2465.876	15		896	M	FE	I	2484.9352	2484.1853	320	9.	896	
FE	I	2467.276	2466.530	1	65.	378		FE	I	2485.280	2484.530	1		378	
FE	I	2467.441	2466.695	30		896	M	FE	I	2485.457	2484.707	20		896	M
FE	I	2467.512	2466.766	20		896	M	FE	I	2485.889	2485.139	15		896	M
FE	I	2468.313	2467.567	30		896		FE	I	2486.014	2485.264	10		896	M
FE	I	2468.4782	2467.7321	60	62.	896		FE	I	2486.7402	2485.9899	50	59.	896	
FE	I	2468.74	2467.99	25		896	M	FE	I	2487.1237	2486.3733	280	8.	896	
FE	I	2469.6258	2468.8795	240	59.	896		FE	I	2487.4419	2486.6914	100	62.	896	
FE	I	2470.412	2469.666	1	10.	378		FE	I	2487.8165	2487.0659	100	62.	896	
FE	I	2471.625	2470.879	20		896	M	FE	I	2488.1203	2487.3696	110	10.	896	
FE	I	2471.7123	2470.9655	80	63.	896		FE	I	2488.8934	2488.1426	620	9.	896	
FE	I	2473.0830	2472.3359	280	63.	896		FE	I	2489.6961	2488.9450	100	164.	896	
FE	I	2473.0987	2472.3515	280		896		FE	I	2489.761	2489.009	20		896	M
FE	I	2473.390	2472.643	20		896	M	FE	I	2490.268	2489.517	20		896	M
FE	I	2473.6421	2472.8948	320	9.	896		FE	I	2490.5015	2489.7503	320	9.	896	
FE	I	2473.904	2473.156	450	8.	896		FE	I	2490.6644	2489.3132	50		896	
FE	I	2474.134	2473.386	30		896	M	FE	I	2490.875	2490.124	15		896	M
FE	I	2474.419	2473.671	15		896	M	FE	I	2491.3955	2490.6441	550	9.	896	
FE	I	2475.190	2474.442	60		896	M	FE	I	2491.9062	2491.1547	450	9.	896	
FE	I	2475.5617	2474.8139	240	62.	896		FE	I	2491.945	2491.193	30		896	M
FE	I	2475.767	2475.019	10		896		FE	I	2492.218	2491.466	40		896	M
FE	I	2476.779	2476.031	0		896	M	FE	I	2492.425	2491.673	20		896	M
FE	I	2477.219	2476.471	40		896		FE	I	2492.734	2491.982	30	163.	896	
FE	I	2477.4047	2476.6566	60	62.	896		FE	I	2492.980	2492.229	30	164.	896	
FE	I	2477.6132	2476.8650	15	65.	896		FE	I	2493.129	2492.377	30		896	M
FE	I	2478.655	2477.907	20		896	M	FE	I	2493.3624	2492.6305	30	63.	896	
FE	I	2478.806	2478.057	10		896	M	FE	I	2493.432	2492.680	15	63.	896	
FE	I	2480.2289	2479.4801	110	65.	896		FE	I	2493.574	2492.822	1	59.	378	
FE	I	2480.379	2479.630	25		896	M	FE	I	2493.641	2492.890	10		896	M
FE	I	2480.5250	2479.7761	340	9.	896		FE	I	2494.503	2493.751	15		896	M
FE	I	2480.936	2480.187	25		896	M	FE	I	2494.7526	2494.0005	60	62.	896	
FE	I	2481.142	2480.393	1		378		FE	I	2495.0037	2494.2515	50	57.	896	
FE	I	2481.700	2480.951	10		896	M	FE	I	2495.2617	2494.5094	10		896	
FE	I	2483.502	2482.752	20		896	M	FE	I	2495.533	2494.781	6		896	
FE	I	2483.771	2483.021	15		896	M	FE	I	2496.623	2495.871	100	57.	896	
FE	I	2484.0210	2483.2713	1000	9.	896		FE	I	2497.089	2496.337	10		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2497.149	2496.396	15		896	M	FE	I	2516.6115	2515.8543	0	104.	896	
FE	I	2497.2861	2496.5333	240	59.	896		FE	I	2516.869	2516.112	50		896	M
FE	I	2497.544	2496.792	40		896	M	FE	I	2517.0076	2516.2502	15	57.	896	
FE	I	2497.744	2496.991	20	164.	896		FE	I	2517.3279	2516.5705	80	61.	896	
FE	I	2498.957	2498.203	8		896	M	FE	I	2518.4192	2517.6615	170	59.	896	
FE	I	2499.451	2498.698	1		378		FE	I	2518.8597	2518.1020	280	7.	896	
FE	I	2499.572	2498.819	8		896	M	FE	I	2519.291	2518.533	8		896	M
FE	I	2499.6508	2498.8975	125	8.	896		FE	I	2519.584	2518.826	15		896	
FE	I	2500.446	2499.693	1	104.	378		FE	I	2519.960	2519.201	15		896	M
FE	I	2501.8861	2501.1323	320	7.	896		FE	I	2520.3874	2519.6292	125	59.	896	
FE	I	2502.406	2501.652	25		896	M	FE	I	2521.627	2520.868	8		896	M
FE	I	2502.4475	2501.6935	50	56.	896		FE	I	2521.7298	2520.9713	25		896	
FE	I	2502.479	2501.725	12		896	M	FE	I	2522.6770	2521.9183	40	58.	896	
FE	I	2503.2449	2502.4907	25		896		FE	I	2523.2386	2522.4798	50	57.	896	
FE	I	2504.2465	2503.4921	25	164.	896		FE	I	2523.270	2522.511	30		896	M
FE	I	2504.856	2504.101	1		378		FE	I	2523.6083	2522.8494	620	7.	896	
FE	I	2505.390	2504.635	1		378		FE	I	2523.651	2522.892	50		896	M
FE	I	2505.766	2505.011	12	163.	896		FE	I	2523.897	2523.137	40		896	M
FE	I	2506.1945	2505.4397	20		896	M	FE	I	2524.082	2523.323	12		896	M
FE	I	2506.2398	2505.4849	40		896		FE	I	2524.133	2523.374	15		896	M
FE	I	2506.408	2505.653	25		896	M	FE	I	2524.4209	2523.6618	140		896	
FE	I	2507.329	2506.574	15	163.	896		FE	I	2524.758	2523.998	20		896	M
FE	I	2507.663	2506.908	25		896	M	FE	I	2524.867	2524.108	20		896	M
FE	I	2508.494	2507.739	15		896	M	FE	I	2525.0519	2524.2927	220	7.	896	
FE	I	2508.6553	2507.8999	220	59.	896		FE	I	2525.361	2524.602	12		896	
FE	I	2509.5086	2508.7530	50	63.	896		FE	I	2525.7833	2525.0239	100		896	
FE	I	2509.704	2508.948	1	59.	378		FE	I	2526.957	2526.198	25		896	M
FE	I	2510.146	2509.390	1		378		FE	I	2527.668	2526.909	15		896	M
FE	I	2511.5909	2510.8348	320	7.	896		FE	I	2527.92	2527.16	5		605	N
FE	I	2513.0319	2512.2754	80		896		FE	I	2528.027	2527.267	20		896	
FE	I	2513.1213	2512.3649	200	8.	896		FE	I	2528.1949	2527.4349	450	7.	896	
FE	I	2514.083	2513.328	3		605	N	FE	I	2528.932	2528.172	15		896	M
FE	I	2514.255	2513.498	15		896	M	FE	I	2529.268	2528.508	15		896	M
FE	I	2514.542	2513.785	20		896	M	FE	I	2529.67	2528.91	3	162.	605	
FE	I	2514.6055	2513.8487	8	164.	896		FE	I	2529.8952	2529.1348	280	7.	896	
FE	I	2515.0363	2514.2794	30		896	M	FE	I	2530.069	2529.308	80		896	
FE	I	2515.0628	2514.3059	20		896	M	FE	I	2530.5963	2529.8357	125	7.	896	
FE	I	2515.277	2514.520	8		896	M	FE	I	2531.4480	2530.6872	140	8.	896	
FE	I	2515.326	2514.569	15		896	M	FE	I	2531.730	2530.969	15		896	M
FE	I	2515.4661	2514.7091	20		896	M	FE	I	2532.190	2531.429	8	162.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	I	2532.26	2531.51	1	162.	605		FE	I	2553.5965	2552.8306	15	55.	896	
FE	I	2533.134	2532.373	12		896	M	FE	I	2553.958	2553.193	7		605	N
FE	I	2533.6366	2532.8754	25	56.	896		FE	I	2555.284	2554.518	1		378	
FE	I	2533.902	2533.140	15		896	M	FE	I	2555.985	2555.219	15		896	M
FE	I	2534.498	2533.737	12		896	M	FE	I	2556.4132	2555.6466	0	58.	896	
FE	I	2534.565	2533.804	60		896		FE	I	2557.0700	2556.3032	15	102.	896	
FE	I	2535.8895	2535.1277	25	60.	896		FE	I	2557.630	2556.863	40	53.	896	
FE	I	2536.211	2535.449	40		896	M	FE	I	2558.0370	2557.2700	12	101.	896	
FE	I	2536.3693	2535.6074	200	7.	896		FE	I	2559.245	2558.478	5		896	M
FE	I	2537.459	2536.697	10		896	M	FE	I	2559.589	2558.822	5		896	M
FE	I	2537.5547	2536.7925	140	58.	896		FE	I	2561.3242	2560.5565	20	56.	896	
FE	I	2537.932	2537.170	50		896	M	FE	I	2562.0392	2561.2713	8	58.	896	
FE	I	2538.2138	2537.4585	40	102.	896		FE	I	2562.6231	2561.8551	12	55.	896	
FE	I	2539.4618	2538.6992	40		896		FE	I	2562.9898	2562.2216	20	55.	896	
FE	I	2539.592	2538.829	25		896	M	FE	I	2562.993	2562.225	20	55.	896	
FE	I	2540.091	2539.328	25		896	M	FE	I	2564.168	2563.399	15		896	M
FE	I	2540.1194	2539.3566	50	55.	896		FE	I	2564.5773	2563.8087	8	55.	896	
FE	I	2540.3501	2539.5873	6	56.	896		FE	I	2565.3285	2564.5598	12	58.	896	
FE	I	2540.617	2539.854	6		896	M	FE	I	2568.6284	2567.8589	8	130.	896	
FE	I	2541.204	2540.441	10		896	M	FE	I	2569.634	2568.865	12	54.	896	
FE	I	2541.493	2540.730	40		896	M	FE	I	2570.366	2569.596	25	52.	896	
FE	I	2541.7350	2540.9719	240	7.	896		FE	I	2570.5137	2569.7437	15	55.	896	
FE	I	2542.865	2542.101	170	162.	896		FE	I	2572.34	2571.57	3	103.	605	
FE	I	2544.687	2543.923	155	162.	896		FE	I	2573.5240	2572.7533	15	102.	896	
FE	I	2545.226	2544.462	1	58.	378		FE	I	2576.514	2575.742	50		896	
FE	I	2545.422	2544.658	20		896	M	FE	I	2577.4623	2576.6907	170	52.	896	
FE	I	2545.469	2544.705	125	162.	896		FE	I	2578.774	2578.003	15		896	M
FE	I	2546.7429	2545.9785	280	7.	896		FE	I	2578.981	2578.209	10		896	M
FE	I	2546.869	2546.104	12		896	M	FE	I	2579.595	2578.825	3		605	N
FE	I	2546.9389	2546.1745	40		896		FE	I	2580.0320	2579.2599	40	55.	896	
FE	I	2547.272	2546.508	10		896	M	FE	I	2580.038	2579.266	4	53.	605	
FE	I	2547.631	2546.866	80		896		FE	I	2580.616	2579.844	12		896	M
FE	I	2548.233	2547.468	0		378		FE	I	2580.8376	2580.0652	8	54.	896	
FE	I	2548.849	2548.084	15		896	M	FE	I	2581.053	2580.281	0		378	
FE	I	2549.677	2548.912	20		896	M	FE	I	2581.0665	2580.2941	8		896	
FE	I	2550.3784	2549.6132	240	7.	896		FE	I	2581.2254	2580.4530	12	54.	896	
FE	I	2551.271	2550.506	12		896	M	FE	I	2581.333	2580.561	1		378	
FE	I	2551.578	2550.812	1	55.	378		FE	I	2581.712	2580.939	1	55.	378	
FE	I	2551.858	2551.092	40		896		FE	I	2582.237	2581.464	8		896	M
FE	I	2553.3717	2552.6059	40	8.	896		FE	I	2582.569	2581.796	50		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	I	2583.068	2582.297	6		605	N	FE	I	2617.520	2616.739	12		896	M
FE	I	2585.3098	2584.5363	380	52.	896		FE	I	2617.914	2617.132	8		896	M
FE	I	2587.330	2586.557	1	171.	605		FE	I	2618.7997	2618.0183	155	52.	896	
FE	I	2588.783	2588.010	8		605	N	FE	I	2619.4913	2618.7098	25	6.	896	
FE	I	2589.673	2588.898	0		378		FE	I	2622.405	2621.623	12		896	M
FE	I	2592.025	2591.252	3		605	N	FE	I	2622.724	2621.942	3		896	M
FE	I	2593.059	2592.285	3		605	N	FE	I	2622.747	2621.965	3		896	M
FE	I	2594.043	2593.268	0	171.	378		FE	I	2624.1484	2623.3657	20	6.	896	
FE	I	2594.285	2593.510	60	146.	896		FE	I	2624.316	2623.533	200	52.	896	
FE	I	2594.820	2594.046	1		605	N	FE	I	2624.409	2623.626	6		896	M
FE	I	2594.9271	2594.1514	0	52.	896		FE	I	2625.444	2624.661	5		896	M
FE	I	2596.2011	2595.4251	0	54.	896		FE	I	2627.9108	2627.1272	3		896	
FE	I	2596.853	2596.077	1	171.	378		FE	I	2627.944	2627.160	3		896	M
FE	I	2597.395	2596.618	0	51.	378		FE	I	2628.0078	2627.2243	5		896	
FE	I	2599.632	2598.855	1	103.	605		FE	I	2630.3566	2629.5725	15	6.	896	
FE	I	2600.341	2599.565	6	52.	605		FE	I	2631.282	2630.498	3		896	M
FE	I	2600.978	2600.202	3		605	N	FE	I	2631.796	2631.012	30		896	M
FE	I	2603.819	2603.042	0		378		FE	I	2633.0216	2632.2369	100	52.	896	
FE	I	2604.332	2603.554	10		896		FE	I	2633.3788	2632.5939	20	6.	896	
FE	I	2604.781	2604.003	3		896	M	FE	I	2633.773	2632.988	5		896	M
FE	I	2605.532	2604.754	15		896		FE	I	2633.907	2633.122	20		896	M
FE	I	2605.642	2604.864	12		896		FE	I	2634.406	2633.621	2		896	M
FE	I	2606.4351	2605.6566	60	51.	896		FE	I	2635.525	2634.740	3		896	M
FE	I	2607.081	2606.303	10		896	M	FE	I	2636.508	2635.723	10		896	M
FE	I	2607.422	2606.644	4		605	N	FE	I	2636.5948	2635.8092	170	52.	896	
FE	I	2607.6056	2606.8269	280	52.	896		FE	I	2636.717	2635.932	5		896	M
FE	I	2609.356	2608.577	20		896		FE	I	2637.2639	2636.4781	30	51.	896	
FE	I	2609.815	2609.036	6		896	M	FE	I	2637.840	2637.054	2		896	M
FE	I	2610.000	2609.221	10		896		FE	I	2639.441	2638.655	10		896	M
FE	I	2610.359	2609.579	8		896	M	FE	I	2639.497	2638.711	5		896	M
FE	I	2610.785	2610.006	15		896	M	FE	I	2639.533	2638.747	15		896	M
FE	I	2611.222	2610.442	4		896	M	FE	I	2641.815	2641.029	6		896	
FE	I	2611.5302	2610.7505	10	6.	896		FE	I	2641.870	2641.084	8		896	M
FE	I	2611.782	2611.002	3		896	M	FE	I	2642.4326	2641.6456	50	50.	896	
FE	I	2613.5523	2612.7722	20	6.	896		FE	I	2643.061	2642.274	0	51.	378	
FE	I	2614.045	2613.265	8		896	M	FE	I	2644.7855	2643.9980	140	52.	896	
FE	I	2615.151	2614.370	4		896	M	FE	I	2645.416	2644.628	6		896	M
FE	I	2615.2745	2614.4940	25	52.	896		FE	I	2646.2095	2645.4216	10	6.	896	
FE	I	2616.202	2615.422	20		896		FE	I	2646.820	2646.032	10		896	M
FE	I	2616.630	2615.849	10		896	M	FE	I	2646.886	2646.098	5		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2648.178	2647.390	1		378		FE	I	2673.275	2672.480	12		896	M
FE	I	2648.3459	2647.5575	20	6.	896		FE	I	2673.579	2672.784	3		896	M
FE	I	2648.707	2647.918	12		896	M	FE	I	2673.881	2673.086	5		896	M
FE	I	2648.953	2648.164	1	99.	378		FE	I	2674.0075	2673.2129	15	50.	896	
FE	I	2649.235	2648.446	2		896	M	FE	I	2675.5095	2674.7146	2	140.	896	
FE	I	2649.336	2648.548	1		378		FE	I	2675.778	2674.983	2		896	M
FE	I	2650.010	2649.222	2		896	M	FE	I	2676.874	2676.078	6		896	M
FE	I	2652.4959	2651.7063	25	51.	896		FE	I	2676.955	2676.159	1		896	
FE	I	2655.93	2655.14	1	100.	605		FE	I	2677.219	2676.423	2		896	M
FE	I	2656.938	2656.147	40	156.	896		FE	I	2678.766	2677.971	8		896	M
FE	I	2657.5826	2656.7920	12	99.	896		FE	I	2678.826	2678.030	6		896	M
FE	I	2658.411	2657.621	3		896	M	FE	I	2678.938	2678.142	1		896	M
FE	I	2659.269	2658.478	8		896	M	FE	I	2679.487	2678.691	12		896	M
FE	I	2659.737	2658.946	3		896	M	FE	I	2679.8582	2679.0622	240	47.	896	
FE	I	2660.041	2659.249	4		896	M	FE	I	2680.309	2679.513	0		378	
FE	I	2661.1888	2660.3973	15	51.	896		FE	I	2680.510	2679.714	2		896	M
FE	I	2661.9828	2661.1911	8	50.	896		FE	I	2680.914	2680.117	10		896	M
FE	I	2662.096	2661.305	12		896	M	FE	I	2681.069	2680.273	2		896	M
FE	I	2662.207	2661.416	8		896	M	FE	I	2681.2489	2680.4526	25	50.	896	
FE	I	2662.6480	2662.0562	30	50.	896		FE	I	2681.7091	2680.9127	4	100.	896	
FE	I	2663.096	2662.304	20		896	M	FE	I	2681.788	2680.991	3		896	M
FE	I	2663.693	2662.901	3		896	M	FE	I	2681.820	2681.023	2		896	M
FE	I	2663.957	2663.165	2		896		FE	I	2681.999	2681.203	12		896	M
FE	I	2664.135	2663.343	10		896	M	FE	I	2682.257	2681.461	10		896	M
FE	I	2664.572	2663.779	3		896	M	FE	I	2682.383	2681.586	20	145.	896	
FE	I	2664.835	2664.043	15		896		FE	I	2682.681	2681.885	1		896	M
FE	I	2664.960	2664.168	12		896	M	FE	I	2683.008	2682.211	20		896	M
FE	I	2667.1915	2666.3986	25	50.	896		FE	I	2683.373	2682.576	5		896	M
FE	I	2667.248	2666.455	8		896	M	FE	I	2683.830	2683.033	2		896	M
FE	I	2667.544	2666.751	60		896	M	FE	I	2683.879	2683.082	8		896	M
FE	I	2667.6054	2666.8123	170	48.	896		FE	I	2684.507	2683.710	4		896	M
FE	I	2667.7583	2666.9652	60	100.	896		FE	I	2684.627	2683.830	6		896	M
FE	I	2668.01	2667.22	1		378		FE	I	2684.733	2683.936	15		896	M
FE	I	2668.7058	2667.9125	12	6.	896		FE	I	2684.865	2684.068	20		896	M
FE	I	2669.700	2668.910	15		896	M	FE	I	2685.314	2684.517	1		896	M
FE	I	2669.756	2668.963	5		896	M	FE	I	2685.381	2684.584	3		896	M
FE	I	2670.286	2669.493	25	156.	896		FE	I	2685.653	2684.857	2	50.	605	
FE	I	2670.516	2669.722	8		896	M	FE	I	2685.698	2684.900	1		896	M
FE	I	2671.580	2670.786	8		896	M	FE	I	2685.897	2685.099	5		896	M
FE	I	2671.786	2670.992	5		896	M	FE	I	2685.940	2685.140	4		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2686.661	2685.863	2		896	M	FE	I	2697.8213	2697.0210	20	100.	896	
FE	I	2687.402	2686.604	1		896	M	FE	I	2698.782	2697.982	5		896	M
FE	I	2687.852	2687.054	20		896	M	FE	I	2698.965	2698.165	20		896	
FE	I	2688.213	2687.415	10		896	M	FE	I	2699.085	2698.285	5		896	M
FE	I	2688.332	2687.534	1		896	M	FE	I	2699.178	2698.377	1		896	M
FE	I	2688.599	2687.801	15		896	M	FE	I	2699.9072	2699.1064	140	48.	896	
FE	I	2690.0109	2689.2125	200	48.	896		FE	I	2700.253	2699.452	6		896	M
FE	I	2690.6278	2689.8292	25	99.	896		FE	I	2700.342	2699.542	1		896	M
FE	I	2690.680	2689.881	12		896	M	FE	I	2700.576	2699.775	4		896	M
FE	I	2690.8672	2690.0686	12	4.	896		FE	I	2701.905	2701.104	3		896	M
FE	I	2690.977	2690.178	5		896	M	FE	I	2701.946	2701.145	8		896	M
FE	I	2691.220	2690.422	2		896	M	FE	I	2701.999	2701.198	4		896	M
FE	I	2692.21 J	2691.490	8		896	M	FE	I	2702.7106	2701.9092	8	161.	896	
FE	I	2693.0473	2692.2482	10	98.	896		FE	I	2703.099	2702.297	2		896	M
FE	I	2693.320	2692.520	5		896	M	FE	I	2703.208	2702.407	2		896	M
FE	I	2693.4487	2692.6495	6	50.	896		FE	I	2703.2508	2702.4492	8	154.	896	
FE	I	2693.605	2692.806	3		896	M	FE	I	2703.564	2702.762	1		896	M
FE	I	2693.805	2693.005	3		896	M	FE	I	2705.551	2704.748	8		896	M
FE	I	2694.202	2693.402	3		896	M	FE	I	2705.668	2704.866	2		896	M
FE	I	2694.279	2693.479	2		896	M	FE	I	2705.883	2705.081	1		896	M
FE	I	2694.847	2694.047	3		896	M	FE	I	2706.8146	2706.0121	80	154.	896	
FE	I	2694.983	2694.184	5		896	M	FE	I	2706.870	2706.067	20		896	M
FE	I	2695.0382	2694.2386	5	4.	896		FE	I	2707.3848	2706.5822	200	48.	896	
FE	I	2695.336	2694.536	15	144.	896		FE	I	2707.623	2706.821	3		896	M
FE	I	2695.8342	2695.0344	30	47.	896		FE	I	2707.682	2706.879	2		896	M
FE	I	2695.949	2695.149	2		896	M	FE	I	2707.803	2707.000	2		896	M
FE	I	2695.980	2695.180	1		896	M	FE	I	2707.837	2707.034	5		896	M
FE	I	2696.009	2695.209	4		896	M	FE	I	2708.251	2707.448	10		896	
FE	I	2696.108	2695.308	1		896	M	FE	I	2708.512	2707.709	1		896	M
FE	I	2696.161	2695.362	3		896	M	FE	I	2708.806	2708.003	3		896	M
FE	I	2696.303	2695.530	20		896	M	FE	I	2708.843	2708.040	2		896	M
FE	I	2696.390	2695.590	3		896	M	FE	I	2709.3742	2708.5712	60	161.	896	
FE	I	2696.451	2695.651	12	145.	896		FE	I	2709.456	2708.653	5		896	M
FE	I	2696.481	2695.681	5		896	M	FE	I	2709.693	2708.890	3		896	M
FE	I	2696.789	2695.989	25		896	M	FE	I	2710.495	2709.691	4	180.	896	
FE	I	2696.923	2696.123	6		896	M	FE	I	2710.793	2709.989	20	144.	896	
FE	I	2697.083	2696.283	50	143.	896		FE	I	2711.221	2710.417	3		896	M
FE	I	2697.586	2696.786	2		896	M	FE	I	2711.244	2710.440	3		896	M
FE	I	2697.695	2696.895	2		896	M	FE	I	2711.3473	2710.5437	20	100.	896	
FE	I	2697.753	2696.953	1		896	M	FE	I	2711.741	2710.938	4		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2711.815	2711.011	1		896	M	FE	I	2726.4085	2725.6014	12	48.	896	
FE	I	2711.855	2711.051	2		896	M	FE	I	2726.611	2725.805	1	161.	605	
FE	I	2711.999	2711.195	2		896	M	FE	I	2726.862	2726.055	80	48.	896	
FE	I	2712.4592	2711.6554	140	47.	896		FE	I	2727.0425	2726.2351	50	161.	896	
FE	I	2713.489	2712.685	2		896	M	FE	I	2728.8275	2728.0197	140	47.	896	
FE	I	2714.249	2713.445	5		896	M	FE	I	2729.6275	2728.8196	50	154.	896	
FE	I	2714.287	2713.483	6		896	M	FE	I	2729.7770	2728.9690	8	4.	896	
FE	I	2714.444	2713.640	10		896	M	FE	I	2731.508	2730.700	10		896	M
FE	I	2714.8635	2714.0591	20	161.	896		FE	I	2731.7904	2730.9819	40	48.	896	
FE	I	2715.6737	2714.8691	40	48.	896		FE	I	2732.0900	2731.2814	5	161.	896	
FE	I	2715.742	2714.938	8		896	M	FE	I	2733.587	2732.778	1		378	
FE	I	2715.925	2715.120	5		896	M	FE	I	2734.3898	2733.5807	320	46.	896	
FE	I	2715.976	2715.171	3		896	M	FE	I	2734.8145	2734.0053	60	48.	896	
FE	I	2716.1252	2715.3205	5	4.	896		FE	I	2735.0769	2734.2676	50	125.	896	
FE	I	2716.209	2715.405	6		896	M	FE	I	2735.4252	2734.6159	30	47.	896	
FE	I	2716.300	2715.500	3		896	M	FE	I	2736.2847	2735.4751	220	46.	896	
FE	I	2716.807	2716.002	3		896	M	FE	I	2736.4216	2735.6120	50	125.	896	
FE	I	2717.0624	2716.2575	50	155.	896		FE	I	2737.7739	2736.9639	8	49.	896	
FE	I	2717.2234	2716.4184	6	154.	896		FE	I	2737.1196	2737.3096	220	5.	896	
FE	I	2718.1710	2717.3658	15	47.	896		FE	I	2738.4500	2737.6399	0	153.	896	
FE	I	2718.5917	2717.7865	50	49.	896		FE	I	2738.643	2737.832	110		896	
FE	I	2718.734	2717.929	12		896	M	FE	I	2739.0237	2738.2135	5	48.	896	
FE	I	2719.2416	2719.4362	155	48.	896		FE	I	2741.9124	2741.1015	8	181.	896	
FE	I	2719.8331	2719.0275	620	5.	896		FE	I	2742.3878	2741.5767	1	98.	896	
FE	I	2719.8660	2719.0604	40		896		FE	I	2742.8268	2742.0156	10	4.	896	
FE	I	2720.2256	2719.4199	100	154.	896		FE	I	2743.0654	2742.2542	155	46.	896	
FE	I	2720.398	2719.592	15		896	M	FE	I	2743.2168	2742.4055	280	5.	896	
FE	I	2721.0026	2720.1967	50	129.	896		FE	I	2744.3766	2743.5651	125	47.	896	
FE	I	2721.3247	2720.5189	0	4.	896		FE	I	2744.8795	2744.0679	140	5.	896	
FE	I	2721.7087	2720.9026	380	5.	896		FE	I	2745.3392	2744.5274	80	46.	896	
FE	I	2721.914	2721.108	8		896	M	FE	I	2746.764	2745.952	0		378	
FE	I	2722.8450	2722.0387	12	97.	896		FE	I	2747.795	2746.982	40	45.	896	
FE	I	2723.838	2723.032	0	154.	378		FE	I	2748.3674	2747.5549	1	125.	896	
FE	I	2724.3845	2723.5778	200	5.	896		FE	I	2750.501	2749.688	0	49.	378	
FE	I	2725.146	2724.339	12		896		FE	I	2750.9537	2750.1405	340	5.	896	
FE	I	2725.477	2724.670	10		896	M	FE	I	2751.5099	2750.6967	5	125.	896	
FE	I	2725.7601	2724.9531	125	48.	896		FE	I	2751.6868	2750.8735	30	128.	896	
FE	I	2726.092	2725.285	8		896	M	FE	I	2752.6164	2751.8029	4		896	
FE	I	2726.118	2725.311	1	98.	378		FE	I	2753.991	2753.098	12		896	M
FE	I	2726.1363	2725.3292	5		896		FE	I	2754.500	2753.686	50	46.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2754.8465	2754.0324	125	47.	896		FE	I	2772.8921	2772.0736	170	45.	896	
FE	I	2755.2399	2754.4258	100	47.	896		FE	I	2772.9284	2772.1099	8	5.	896	
FE	I	2755.757	2754.942	12		896	M	FE	I	2773.137	2772.318	20		896	
FE	I	2755.9953	2755.1809	15	153.	896		FE	I	2773.327	2772.508	25		896	
FE	I	2756.901	2756.086	4		896	M	FE	I	2773.644	2772.826	8	179.	896	
FE	I	2757.0818	2756.2672	4	4.	896		FE	I	2774.050	2773.232	50		896	
FE	I	2757.1430	2756.3284	155	5.	896		FE	I	2774.7216	2773.9027	6	151.	896	
FE	I	2758.1306	2757.3157	100	46.	896		FE	I	2774.9804	2774.1614	6	127.	896	
FE	I	2758.237	2757.422	30		896	M	FE	I	2775.5488	2774.7297	20	46.	896	
FE	I	2758.350	2757.535	8		896	M	FE	I	2775.757	2774.938	10		896	M
FE	I	2758.673	2757.858	5		896		FE	I	2776.663	2775.844	10		896	M
FE	I	2759.564	2758.749	4		896	M	FE	I	2777.217	2776.397	15		896	M
FE	I	2759.808	2758.933	1		378		FE	I	2777.267	2776.448	3		896	M
FE	I	2760.294	2759.479	6		896	M	FE	I	2777.586	2776.767	1		378	M
FE	I	2760.628	2759.813	50	47.	896		FE	I	2778.450	2777.631	15		896	M
FE	I	2761.438	2760.623	1	127.	378		FE	I	2778.887	2778.067	60		896	
FE	I	2761.707	2760.891	25		896	M	FE	I	2779.0405	2778.2205	240	44.	896	
FE	I	2762.265	2761.449	8		896		FE	I	2779.662	2778.841	40		896	
FE	I	2762.2961	2761.4802	4	140.	896	M	FE	I	2781.346	2780.526	1	92.	378	
FE	I	2762.5957	2761.7798	110	46.	896		FE	I	2781.5181	2780.6975	15	160.	896	
FE	I	2762.8424	2762.0264	125	46.	896		FE	I	2781.7032	2780.8826	12	45.	896	
FE	I	2763.497	2762.681	12		896	M	FE	I	2782.6563	2781.8355	20	46.	896	
FE	I	2763.5881	2762.7719	110	125.	896		FE	I	2782.874	2782.053	6	126.	896	
FE	I	2763.9256	2763.1093	110	47.	896		FE	I	2784.3722	2783.5509	3	95.	896	
FE	I	2764.935	2764.118	20		896		FE	I	2784.8300	2784.0087	5	160.	896	
FE	I	2765.1396	2764.3230	30	128.	896		FE	I	2785.164	2784.343	8	152.	896	
FE	I	2766.51	2765.70	1	92.	605		FE	I	2785.949	2785.127	3		896	M
FE	I	2766.808	2765.991	4		896	M	FE	I	2786.097	2785.275	8		896	M
FE	I	2766.85	2766.03	1	160.	605		FE	I	2787.00	2786.18	1	123.	605	
FE	I	2767.377	2766.560	1	152.	378		FE	I	2787.603	2786.781	6		896	
FE	I	2767.476	2766.659	12		896	M	FE	I	2787.767	2786.944	5		896	M
FE	I	2767.7268	2766.9096	80	47.	896		FE	I	2787.94	2787.12	1	151.	605	
FE	I	2768.3396	2767.5222	155	46.	896		FE	I	2788.7540	2787.9317	20	93.	896	
FE	I	2768.922	2768.105	20		896	M	FE	I	2788.926	2788.104	550	44.	896	
FE	I	2769.249	2768.432	15	126.	896		FE	I	2790.300	2789.477	15	125.	896	
FE	I	2769.397	2768.580	10		896	M	FE	I	2790.6247	2789.8019	20	170.	896	
FE	I	2770.1148	2769.2970	50	151.	896		FE	I	2790.670	2789.847	6		896	M
FE	I	2770.4891	2769.6713	40	44.	896		FE	I	2791.585	2790.762	0		378	
FE	I	2771.5132	2770.6951	10	123.	896		FE	I	2792.278	2791.454	12		896	M
FE	I	2772.698	2771.880	40		896	M	FE	I	2792.6088	2791.7856	20	151.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	I	2793.2221	2792.3987	25	95.	896		FE	I	2820.292	2819.462	1	159.	378	
FE	I	2794.192	2793.368	3		896	M	FE	I	2821.6331	2820.8028	2	2.	896	
FE	I	2794.611	2793.787	5		896	M	FE	I	2822.46	2821.63	1	134.	605	
FE	I	2794.752	2793.928	30		896	M	FE	I	2824.1069	2823.2760	170	44.	896	
FE	I	2794.979	2794.157	1	124.	605		FE	I	2825.5314	2824.7001	3	170.	896	
FE	I	2795.5262	2794.7022	20	46.	896		FE	I	2826.3874	2825.5557	240	45.	896	
FE	I	2795.8294	2795.0054	12	3.	896		FE	I	2826.5190	2825.6874	50	3.	896	
FE	I	2796.3643	2795.5401	30	94.	896		FE	I	2826.8261	2825.9945	1	3.	896	
FE	I	2796.681	2795.857	15		896	M	FE	I	2827.3291	2826.4973	8	92.	896	
FE	I	2797.6951	2796.8706	2	96.	896		FE	I	2828.50	2827.67	2	169.	605	
FE	I	2797.870	2797.046	0		378		FE	I	2828.7240	2827.8919	12	3.	896	
FE	I	2798.5999	2797.7752	140	45.	896		FE	I	2829.6405	2828.8082	110	45.	896	
FE	I	2799.91	2799.146	30		896		FE	I	2831.587	2830.754	0	378		
FE	I	2801.292	2800.467	10		896	M	FE	I	2833.2690	2832.4358	380	44.	896	
FE	I	2803.111	2802.285	0		378		FE	I	2834.235	2833.401	30	137.	896	
FE	I	2803.9924	2803.1663	6	3.	896		FE	I	2834.241	2833.408	3		896	M
FE	I	2804.4390	2803.6129	10	151.	896		FE	I	2834.650	2833.817	3		896	M
FE	I	2805.3469	2804.5206	200	44.	896		FE	I	2835.0064	2834.1728	6	93.	896	
FE	I	2805.6886	2804.8622	10	170.	896		FE	I	2835.2470	2834.4133	1	92.	896	
FE	I	2805.930	2805.104	5		896	M	FE	I	2835.2530	2834.4194	1	90.	896	
FE	I	2806.6346	2805.8079	6	92.	896		FE	I	2835.5873	2834.7535	10	159.	896	
FE	I	2806.897	2806.070	5	139.	896		FE	I	2836.2905	2835.4565	15	2.	896	
FE	I	2807.3	2806.5	1	176.	605		FE	I	2836.495	2835.661	5		896	M
FE	I	2807.8115	2806.9843	380	45.	896		FE	I	2836.7838	2835.9497	110	93.	896	
FE	I	2808.0722	2807.2452	3	2.	896		FE	I	2837.149	2836.315	5	175.	896	
FE	I	2808.79	2807.96	1	94.	605		FE	I	2838.9539	2838.1193	140	44.	896	
FE	I	2809.1542	2808.3269	40	45.	896		FE	I	2839.282	2838.448	8		896	M
FE	I	2811.090	2810.262	5		896	M	FE	I	2841.2572	2840.4220	12	2.	896	
FE	I	2811.662	2810.834	1		378		FE	I	2841.7720	2840.9367	4	123.	896	
FE	I	2811.9904	2811.1624	1	92.	896		FE	I	2843.747	2842.911	2		896	M
FE	I	2812.8704	2812.0422	12	170.	896		FE	I	2844.049	2843.213	4		896	M
FE	I	2812.943	2812.114	3		896	M	FE	I	2844.4666	2843.6307	140	43.	896	
FE	I	2813.14	2812.31	1	96.	605		FE	I	2844.7563	2843.9202	0	2.	896	
FE	I	2814.1151	2813.2866	500	44.	896		FE	I	2844.8126	2843.9766	320	44.	896	
FE	I	2815.8434	2815.0144	3	138.	896		FE	I	2846.3837	2845.5473	12	90.	896	
FE	I	2816.3365	2815.5075	20	95.	896		FE	I	2846.4309	2845.5945	100	43.	896	
FE	I	2816.665	2815.836	0		378		FE	I	2846.5502	2845.7137	12	88.	896	
FE	I	2818.3331	2817.5036	20	44.	896		FE	I	2847.6664	2846.8296	6	87.	896	
FE	I	2818.770	2817.940	5		896	M	FE	I	2848.720	2847.883	4		896	M
FE	I	2820.1331	2819.3031	12	170.	896		FE	I	2849.5511	2848.7139	40	43.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2852.3473	2851.5094	5	159.	896		FE	I	2879.606	2878.762	1		378	
FE	I	2852.6347	2851.7968	280	44.	896		FE	I	2879.7962	2878.9516	4	136.	896	
FE	I	2852.965	2852.127	3		896	M	FE	I	2880.3018	2879.4570	0	136.	896	
FE	I	2853.444	2852.606	10		896	M	FE	I	2880.586	2879.741	0		378	
FE	I	2853.8035	2852.9653	1	89.	896		FE	I	2881.4241	2880.5791	5	43.	896	
FE	I	2854.5223	2853.6838	8	88.	896		FE	I	2882.423	2881.578	12		896	M
FE	I	2854.6100	2853.7716	6	159.	896		FE	I	2883.480	2882.634	0		378	
FE	I	2858.04	2857.20	1	123.	605		FE	I	2884.5933	2883.7475	8	167.	896	
FE	I	2858.650	2857.810	4		896	M	FE	I	2887.1624	2886.3159	6	87.	896	
FE	I	2858.835	2857.996	1		378		FE	I	2888.2048	2887.3580	2	150.	896	
FE	I	2859.7353	2858.8956	12	2.	896		FE	I	2888.6516	2887.8048	15	167.	896	
FE	I	2861.046	2860.206	0		378		FE	I	2888.8033	2887.9565	1	149.	896	
FE	I	2862.837	2861.996	0		378		FE	I	2890.711	2889.864	2		896	M
FE	I	2863.3345	2862.4939	15	43.	896		FE	I	2890.7482	2889.9008	4	149.	896	
FE	I	2864.2700	2863.4292	25	87.	896		FE	I	2890.8361	2889.9887	5	142.	896	
FE	I	2864.7044	2863.8635	15	2.	896		FE	I	2891.261	2890.414	1		378	
FE	I	2866.030	2865.191	3		605	N	FE	I	2891.7038	2890.8562	1	184.	896	
FE	I	2867.226	2866.385	1	168.	378		FE	I	2892.2512	2891.4035	1	89.	896	
FE	I	2867.4665	2866.6249	30	43.	896		FE	I	2892.535	2891.688	3		896	M
FE	I	2867.561	2866.719	12		896	M	FE	I	2892.5546	2891.7068	3	183.	896	
FE	I	2868.1508	2867.3091	15	93.	896		FE	I	2892.753	2891.905	4		896	
FE	I	2868.4032	2867.5614	10	90.	896		FE	I	2893.3259	2892.4779	6	142.	896	
FE	I	2868.7207	2867.8788	4	91.	896		FE	I	2894.6110	2893.7627	8	43.	896	
FE	I	2869.0559	2868.2140	8	142.	896		FE	I	2894.7290	2893.8807	8	88.	896	
FE	I	2869.2955	2868.4534	6	135.	896		FE	I	2895.3523	2894.5038	50	134.	896	
FE	I	2870.072	2869.230	10		896	M	FE	I	2895.8833	2895.0347	40	87.	896	
FE	I	2870.1497	2869.3075	50	2.	896		FE	I	2897.444	2896.595	0		378	
FE	I	2870.668	2869.826	5	142.	896		FE	I	2898.486	2897.637	2	142.	896	
FE	I	2872.115	2871.273	1		896	M	FE	I	2899.200	2898.351	8		896	M
FE	I	2872.15	2871.31	1	174.	605		FE	I	2899.7068	2898.8573	1		896	
FE	I	2872.57	2871.73	1	149.	605		FE	I	2900.107	2899.258	2		896	M
FE	I	2873.1768	2872.3338	50	43.	896		FE	I	2900.2649	2899.4152	25	133.	896	
FE	I	2873.3417	2872.4987	0	177.	896		FE	I	2902.2303	2901.3802	15	89.	896	
FE	I	2874.4960	2873.6527	8	158.	896		FE	I	2902.761	2901.910	25	142.	896	
FE	I	2875.0159	2874.1725	80	2.	896		FE	I	2904.938	2904.087	2		896	M
FE	I	2875.7242	2874.8806	8	142.	896		FE	I	2905.011	2904.160	5		896	M
FE	I	2876.090	2875.246	4		896	M	FE	I	2905.373	2904.522	0		378	
FE	I	2876.1456	2875.3019	10	86.	896		FE	I	2906.42	2905.57	1	182.	605	
FE	I	2877.569	2876.725	1		378		FE	I	2907.267	2906.416	5		896	M
FE	I	2878.1449	2877.3007	40	86.	896		FE	I	2907.592	2906.741	0	150.	378	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	2908.3687	2907.5170	20	167.	896		FE	I	2932.6629	2931.8052	3	166.	896	
FE	I	2909.7081	2908.8561	8	142.	896		FE	I	2935.229	2934.371	2	117.	896	
FE	I	2910.1678	2909.3157	2	149.	896		FE	I	2936.9748	2936.1161	8	89.	896	
FE	I	2910.351	2909.499	5		896	M	FE	I	2937.297	2936.438	4		896	M
FE	I	2911.7785	2910.9260	3	168.	896		FE	I	2937.7623	2936.9034	340	1.	896	
FE	I	2913.0103	2912.1574	110	1.	896		FE	I	2938.666	2937.807	40	122.	896	
FE	I	2913.1095	2912.2566	1	86.	896		FE	I	2939.931	2939.071	4	118.	896	
FE	I	2915.050	2914.197	3		896	M	FE	I	2941.449	2940.589	10	173.	896	
FE	I	2915.1572	2914.3038	6	89.	896		FE	I	2942.2027	2941.3426	60	1.	896	
FE	I	2918.878	2918.024	40	182.	896		FE	I	2942.63	2941.77	1	141.	605	
FE	I	2919.2068	2918.3525	10	134.	896		FE	I	2944.434	2943.574	2		896	M
FE	I	2919.671	2918.816	4		896	M	FE	I	2945.913	2945.052	10		896	
FE	I	2920.069	2919.214	4		896	M	FE	I	2946.731	2945.870	0		378	
FE	I	2920.695	2919.840	8	142.	896		FE	I	2946.956	2946.095	1		378	
FE	I	2921.14	2920.29	1	136.	605		FE	I	2947.978	2947.116	0	182.	378	
FE	I	2921.5449	2920.6900	4	87.	896		FE	I	2948.2246	2947.3631	6	131.	896	
FE	I	2921.837	2920.981	4		896	M	FE	I	2948.7376	2947.8759	320	1.	896	
FE	I	2923.067	2922.211	2		896	M	FE	I	2949.2947	2948.4329	40	166.	896	
FE	I	2923.236	2922.383	1	86.	605		FE	I	2949.589	2948.727	3	118.	896	
FE	I	2923.479	2922.623	6	122.	896		FE	I	2949.813	2948.952	3		896	M
FE	I	2924.020	2923.164	5		896	M	FE	I	2950.551	2949.688	0	117.	378	
FE	I	2924.142	2923.286	20	182.	896		FE	I	2951.105	2950.243	60	120.	896	
FE	I	2924.286	2923.430	12		896	M	FE	I	2952.219	2951.356	0		378	
FE	I	2924.7085	2923.8528	30	166.	896		FE	I	2954.3493	2953.4862	25	166.	896	
FE	I	2924.857	2924.002	0	166.	378		FE	I	2954.402	2953.539	2		896	M
FE	I	2925.46	2924.59	1	121.	605		FE	I	2954.8031	2953.9399	240	1.	896	
FE	I	2926.2139	2925.3578	12	167.	896		FE	I	2955.5155	2954.6522	12	132.	896	
FE	I	2926.641	2925.785	10		896	M	FE	I	2957.568	2956.704	6	118.	896	
FE	I	2926.7558	2925.8996	10	89.	896		FE	I	2957.722	2956.858	3	165.	896	
FE	I	2927.410	2926.553	2		896	M	FE	I	2958.2284	2957.3644	155	1.	896	
FE	I	2927.471	2926.614	4		896	M	FE	I	2958.3503	2957.4863	6	132.	896	
FE	I	2928.40	2927.55	3		605	N	FE	I	2959.326	2958.462	1	317.	378	
FE	I	2928.960	2928.103	3	121.	896		FE	I	2960.193	2959.329	5		896	M
FE	I	2929.6076	2928.7507	3	131.	896		FE	I	2960.547	2959.683	15	172.	896	
FE	I	2929.8642	2929.0072	110	1.	896		FE	I	2960.8559	2959.9912	80	316.	896	
FE	I	2929.966	2929.109	15	182.	896		FE	I	2961.1608	2960.2961	6	134.	896	
FE	I	2930.096	2929.239	4		896	M	FE	I	2961.419	2960.554	3		896	M
FE	I	2930.4751	2929.6180	6	87.	896		FE	I	2961.5251	2960.6602	3	178.	896	
FE	I	2931.45	2930.59	1	141.	605		FE	I	2962.56	2961.70	1	119.	605	
FE	I	2932.2697	2931.4121	2	148.	896		FE	I	2962.9732	2962.1080	1	57.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	I	2964.57	2963.71	1	173.	605		FE	I	2994.666	2993.793	6		896	M
FE	I	2965.000	2964.140	1		896	M	FE	I	2995.3002	2994.4269	320	9.	896	
FE	I	2965.062	2964.196	1		378		FE	I	2995.3751	2994.5019	155	11.	896	
FE	I	2966.1204	2965.2544	125	1.	896		FE	I	2996.549	2995.676	5		896	M
FE	I	2966.672	2965.806	15	147.	896		FE	I	2996.712	2995.838	1	178.	605	
FE	I	2967.131	2966.264	25	118.	896		FE	I	2997.2587	2996.3850	10	134.	896	
FE	I	2967.7646	2966.8982	380	1.	896		FE	I	2999.139	2998.265	5		896	M
FE	I	2969.3442	2968.4774	3	135.	896		FE	I	3000.066	2999.191	8		896	M
FE	I	2970.227	2969.360	110	11.	896		FE	I	3000.3863	2999.5118	220	30.	896	
FE	I	2970.3414	2969.4743	50	30.	896		FE	I	3000.573	2999.699	10		896	M
FE	I	2970.9667	2970.0995	280	1.	896		FE	I	3001.3255	3000.4508	110	56.	896	
FE	I	2970.9853	2970.1181	280	11.	896		FE	I	3001.8226	3000.9477	280	9.	896	
FE	I	2973.147	2972.280	50	118.	896		FE	I	3002.5304	3001.6554	60	506.	896	
FE	I	2974.0002	2973.1322	340	1.	896		FE	I	3003.9055	3003.0302	25	30.	896	
FE	I	2974.1032	2973.2352	220	1.	896		FE	I	3004.739	3003.863	4		896	M
FE	I	2975.649	2974.780	0	335.	896		FE	I	3004.9913	3004.1157	6	199.	896	
FE	I	2976.524	2975.655	0		378		FE	I	3005.505	3004.630	3	57.	896	
FE	I	2976.9969	2976.1282	12	131.	896		FE	I	3006.181	3005.305	8	199.	896	
FE	I	2977.3658	2976.4970	3	56.	896		FE	I	3007.324	3006.448	4		896	M
FE	I	2977.778	2976.909	2	172.	896		FE	I	3007.419	3006.543	5		896	M
FE	I	2978.929	2978.060	1		378		FE	I	3007.474	3006.598	0		378	
FE	I	2981.4039	2980.5341	12	317.	896		FE	I	3008.0216	3007.1452	40	55.	896	
FE	I	2982.3151	2981.4451	240	11.	896		FE	I	3008.1588	3007.2823	140	11.	896	
FE	I	2982.722	2981.852	25	118.	896		FE	I	3009.0157	3008.1390	220	9.	896	
FE	I	2983.0990	2982.2288	2	178.	896		FE	I	3009.9702	3009.0933	10	198.	896	
FE	I	2984.4403	2983.5698	320	9.	896		FE	I	3010.4460	3009.5689	110	30.	896	
FE	I	2985.430	2984.559	5		896	M	FE	I	3012.3592	3011.4817	50	316.	896	
FE	I	2985.638	2984.767	60	29.	896		FE	I	3012.761	3011.883	2	135.	378	
FE	I	2985.831	2984.960	3		896	M	FE	I	3013.320	3012.443	5		896	M
FE	I	2987.3270	2986.4557	15	11.	896		FE	I	3014.9839	3014.1057	3	458.	896	
FE	I	2987.530	2986.650	4	200.	896		FE	I	3015.0514	3014.1732	4	31.	896	
FE	I	2988.1617	2987.2902	30	30.	896		FE	I	3016.7991	3015.9205	6	198.	896	
FE	I	2988.985	2988.113	3		896	M	FE	I	3017.0602	3016.1815	12	30.	896	
FE	I	2989.3434	2988.4716	8	56.	896		FE	I	3018.138	3017.259	3		896	M
FE	I	2989.811	2988.942	M	316.	605		FE	I	3018.297	3017.418	4		896	M
FE	I	2990.27	2989.39	1	85.	605		FE	I	3018.5062	3017.6272	60	9.	896	
FE	I	2991.2635	2990.3913	40	316.	896		FE	I	3018.735	3017.856	5		896	M
FE	I	2992.504	2991.632	3		896		FE	I	3018.926	3018.047	4		896	M
FE	I	2992.635	2991.762	15		896	M	FE	I	3019.0151	3018.1359	5	199.	896	
FE	I	2994.054	2993.181	5		896	M	FE	I	3019.8620	3018.9826	60	30.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3020.113	3019.234	25		896	M	FE	I	3040.2027	3039.3182	4	199.	896	
FE	I	3020.1693	3019.2898	4	199.	896		FE	I	3041.3119	3040.4271	50	30.	896	
FE	I	3020.261	3019.381	20		896	M	FE	I	3041.847	3040.962	4		896	M
FE	I	3020.532	3019.652	5		896	M	FE	I	3042.5222	3041.6372	80	56.	896	
FE	I	3020.684	3019.804	30		896	M	FE	I	3042.6234	3041.7384	50	30.	896	
FE	I	3021.3704	3020.4907	220	9.	896		FE	I	3042.9043	3042.0192	15	30.	896	
FE	I	3021.5189	3020.6391	380	9.	896		FE	I	3043.5497	3042.6644	25	30.	896	
FE	I	3021.9526	3021.0727	240	9.	896		FE	I	3043.728	3042.843	4		896	M
FE	I	3022.211	3021.331	50		896	M	FE	I	3045.208	3044.323	3		896	M
FE	I	3022.629	3021.749	25		896	M	FE	I	3045.9642	3045.0783	40	29.	896	
FE	I	3023.211	3022.330	6		896	M	FE	I	3046.389	3045.503	3		896	M
FE	I	3023.654	3022.773	4		896	M	FE	I	3046.4734	3045.5874	12	198.	896	
FE	I	3024.072	3023.192	5		896	M	FE	I	3047.213	3046.337	5		896	M
FE	I	3024.461	3023.583	M	103.	605		FE	I	3047.703	3046.819	M	315.	605	
FE	I	3024.9131	3024.0325	220	11.	896		FE	I	3047.8129	3046.9265	8	198.	896	
FE	I	3025.164	3024.283	10		896	M	FE	I	3047.9362	3047.0498	15	457.	896	
FE	I	3025.463	3024.582	3		896	M	FE	I	3048.084	3047.201	M	382.	605	
FE	I	3025.679	3024.798	5		896	M	FE	I	3048.4909	3047.6043	280	9.	896	
FE	I	3025.752	3024.871	5		896	M	FE	I	3049.339	3048.452	6		896	M
FE	I	3026.161	3025.280	15	29.	896		FE	I	3049.763	3048.876	5		896	M
FE	I	3026.5194	3025.6384	125	198.	896		FE	I	3050.241	3049.354	3		896	
FE	I	3026.7235	3025.8425	220	9.	896		FE	I	3053.950	3053.065	110	131.	488	
FE	I	3027.3426	3026.4614	30	30.	896		FE	I	3053.9549	3053.0670	10	131.	896	
FE	I	3030.1156	3029.2337	8	56.	896		FE	I	3054.317	3053.429	8	398.	896	
FE	I	3031.0306	3030.1484	80	198.	896		FE	I	3054.343	3053.455	6	31.	896	
FE	I	3031.4856	3030.6033	4	145.	896		FE	I	3054.426	3053.538	3		896	M
FE	I	3031.669	3030.787	10	459.	896		FE	I	3054.766	3053.878	3		896	M
FE	I	3032.0969	3031.2144	60	198.	896		FE	I	3055.835	3054.949	M	263.	605	
FE	I	3032.206	3031.324	5		896	M	FE	I	3056.1505	3055.2620	50	55.	896	
FE	I	3032.5161	3031.6336	25	30.	896		FE	I	3056.182	3055.294	4		896	M
FE	I	3032.600	3031.718	3		896	M	FE	I	3056.599	3055.710	4		896	M
FE	I	3033.9831	3033.1002	5	131.	896		FE	I	3057.061	3056.173	4		896	M
FE	I	3034.278	3033.395	5		896	M	FE	I	3057.130	3056.242	8		896	
FE	I	3035.3675	3034.4842	60	57.	896		FE	I	3058.3346	3057.4456	240	28.	896	
FE	I	3036.621	3035.737	5		896	M	FE	I	3058.678	3057.789	6	29.	896	
FE	I	3037.007	3036.123	5		896	M	FE	I	3058.701	3057.812	5	29.	896	
FE	I	3038.2726	3037.3887	280	9.	896		FE	I	3058.924	3058.034	8		896	M
FE	I	3038.6633	3037.7793	50	31.	896		FE	I	3059.253	3058.364	5		896	M
FE	I	3039.198	3038.314	5		896		FE	I	3059.383	3058.493	20		896	M
FE	I	3039.537	3038.653	4		896	M	FE	I	3059.9750	3059.0856	320	9.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3061.249	3060.359	5		896	M	FE	I	3086.469	3085.573	3		896	M
FE	I	3061.4272	3060.5375	5	457.	896		FE	I	3088.317	3087.420	1		378	
FE	I	3061.511	3060.621	4		896	M	FE	I	3089.562	3088.665	20		896	M
FE	I	3061.667	3060.777	4		896	M	FE	I	3091.1023	3090.2051	2	313.	896	
FE	I	3061.8731	3060.9832	5	55.	896		FE	I	3092.4745	3091.5769	110	28.	896	
FE	I	3063.759	3062.872	1	456.	605		FE	I	3093.608	3092.710	10		896	M
FE	I	3064.036	3063.149	1	102.	605		FE	I	3093.6789	3092.7811	10	29.	896	
FE	I	3064.8212	3063.9306	5	132.	896		FE	I	3094.253	3093.355	6		896	M
FE	I	3064.909	3064.018	4		896	M	FE	I	3094.7025	3093.8044	8	55.	896	
FE	I	3067.3699	3066.4786	6	313.	896		FE	I	3094.776	3093.878	30	261.	896	
FE	I	3067.891	3066.999	4		896	M	FE	I	3095.798	3094.900	10	315.	896	
FE	I	3068.0096	3067.1182	30	56.	896		FE	I	3096.1652	3095.2668	6	314.	896	
FE	I	3068.1355	3067.2441	155.	28.	896		FE	I	3096.943	3096.044	1		378	
FE	I	3068.8398	3067.9482	5	315.	896		FE	I	3098.399	3097.500	0	165.	378	
FE	I	3069.0649	3068.1732	25	55.	896		FE	I	3098.674	3097.775	6		896	M
FE	I	3069.816	3068.927		53.	605		FE	I	3098.783	3097.884	5		896	M
FE	I	3070.335	3069.443	3		896	M	FE	I	3099.0883	3098.1891	80	313.	896	
FE	I	3072.168	3071.276	1	456.	378		FE	I	3099.862	3098.963	1	102.	378	
FE	I	3072.938	3072.045	3		896	M	FE	I	3100.018	3099.118	0		378	
FE	I	3073.182	3072.290	4		896	M	FE	I	3100.7947	3099.8951	100	28.	896	
FE	I	3074.126	3073.233	3	549.	896		FE	I	3100.8675	3099.9679	100	28.	896	
FE	I	3074.8714	3073.9783	4	313.	896		FE	I	3101.2028	3100.3031	60	28.	896	
FE	I	3075.0404	3074.1473	5	457.	896		FE	I	3101.5649	3100.6651	100	28.	896	
FE	I	3075.330	3074.437	5		896	M	FE	I	3101.7361	3100.8363	10	196.	896	
FE	I	3076.6128	3075.7193	110	28.	896		FE	I	3101.9016	3101.0017	0	313.	896	
FE	I	3076.843	3075.950	4		896	M	FE	I	3103.537	3102.637	5	29.	896	
FE	I	3078.530	3077.636	4		896	M	FE	I	3103.61	3102.71	4		605	N
FE	I	3078.9096	3078.0155	15	29.	896		FE	I	3104.661	3103.760	1		378	
FE	I	3079.153	3078.259	3		896	M	FE	I	3107.4396	3106.5383	4	196.	896	
FE	I	3079.3267	3078.4324	6	131.	896		FE	I	3108.879	3107.978	2		378	
FE	I	3080.885	3079.990	1		896	M	FE	I	3109.9395	3109.0376	5	165.	896	
FE	I	3081.005	3080.110	4		896	M	FE	I	3112.5873	3111.6847	6	260.	896	
FE	I	3081.897	3081.002	4		896	M	FE	I	3112.9802	3112.7775	4	455.	896	
FE	I	3082.173	3081.278	1	457.	378		FE	I	3114.495	3113.592	2		378	
FE	I	3082.629	3081.734	3		896	M	FE	I	3114.957	3114.054	1	53.	378	
FE	I	3082.727	3081.832	1	53.	378		FE	I	3116.560	3115.656	2		378	
FE	I	3083.048	3082.153	3		896	M	FE	I	3116.766	3115.862	1	456.	378	
FE	I	3084.045	3083.152	1	197.	605		FE	I	3117.155	3116.251	4	165.	896	
FE	I	3084.6368	3083.7413	50	28.	896		FE	I	3117.283	3116.379	1	261.	378	
FE	I	3085.357	3084.461	4		896	M	FE	I	3117.410	3116.510	5	261.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3117.5352	3116.6313	8	28.	896		FE	I	3145.835	3144.924	1	195.	378	
FE	I	3117.888	3116.984	1	578.	378		FE	I	3145.9625	3145.0565	5	455.	896	
FE	I	3118.5436	3117.6395	5	29.	896		FE	I	3147.3790	3146.4676	0	160.	896	
FE	I	3119.936	3119.032	0	315.	378		FE	I	3148.202	3147.291	4		896	M
FE	I	3120.3989	3119.4944	20	194.	896		FE	I	3148.515	3147.603	5		896	M
FE	I	3121.125	3120.220	2		378		FE	I	3148.7070	3147.7954	4	455.	896	
FE	I	3121.3394	3120.4346	15	194.	896		FE	I	3149.090	3148.178	1		378	
FE	I	3122.056	3121.151	1	163.	378		FE	I	3149.3182	3148.4064	4	194.	896	
FE	I	3122.6614	3121.7563	5	102.	896		FE	I	3149.588	3148.676	0		378	
FE	I	3123.5728	3122.6674	3	314.	896		FE	I	3150.404	3149.492	1	453.	378	
FE	I	3124.2536	3123.3481	4	164.	896		FE	I	3151.2196	3150.3073	4	578.1	896	
FE	I	3124.450	3123.545	1		378		FE	I	3151.674	3150.762	1	813.	378	
FE	I	3125.062	3124.096	3	165.	896		FE	I	3152.264	3151.352	20	311.	896	
FE	I	3125.918	3125.012	1	53.	378	P	FE	I	3152.7786	3151.8658	6	7.	896	
FE	I	3125.93	3125.03		53.	1015		FE	I	3153.9632	3153.0502	4	99.	896	
FE	I	3126.5570	3125.6509	40	28.	896		FE	I	3154.1125	3153.1994	10	161.	896	
FE	I	3126.5616	3125.6555	40	160.	896		FE	I	3154.2275	3153.3144	4	160.	896	
FE	I	3127.09	3126.15	40		896		FE	I	3154.665	3153.751	4		896	M
FE	I	3127.728	3126.822	1	260.	378		FE	I	3155.019	3154.106	1	53.	378	
FE	I	3129.8046	3128.8977	5	54.	896		FE	I	3155.3288	3154.4155	6	100.	896	
FE	I	3130.082	3129.178	1	161.	605		FE	I	3155.4094	3154.4960	3	161.	896	
FE	I	3130.2402	3129.3331	5	52.	896		FE	I	3156.0304	3155.1169	3	161.	896	
FE	I	3132.145	3131.238	0		378		FE	I	3156.2072	3155.2936	6	193.	896	
FE	I	3133.4256	3132.5178	5	578.	896		FE	I	3156.710	3155.796	4	192.1	896	
FE	I	3134.082	3133.174	0		378		FE	I	3157.1872	3156.2734	10	578.	896	
FE	I	3135.0179	3134.1097	10	28.	896		FE	I	3157.3770	3156.4631	4	454.	896	
FE	I	3135.309	3134.401	1		378		FE	I	3157.9498	3157.0358	20	160.	896	
FE	I	3135.549	3134.641	0		378		FE	I	3158.057	3157.143	4	144.	896	
FE	I	3136.498	3135.590	1		378		FE	I	3158.8000	3157.8858	12	164.	896	
FE	I	3136.7683	3135.8596	5	194.	896		FE	I	3158.9012	3157.9869	3	159.	896	
FE	I	3137.08	3136.17	3		605	N	FE	I	3159.097	3158.183	4		896	
FE	I	3139.309	3138.400	0	53.	378		FE	I	3159.90	3158.99	2	452.	605	
FE	I	3140.5675	3139.6579	5	155.	896		FE	I	3160.163	3159.248	1	259.	378	
FE	I	3140.815	3139.908	4		605	N	FE	I	3160.351	3159.437	1		378	
FE	I	3141.3001	3140.3903	6	578.	896		FE	I	3161.1119	3160.1971	6	578.	896	
FE	I	3143.3639	3142.4536	8	164.	896		FE	I	3161.2568	3160.3420	20	192.1	896	
FE	I	3143.7990	3142.8885	10	144.	896		FE	I	3161.5725	3160.6575	25	155.	896	
FE	I	3144.1531	3143.2425	10	7.	896		FE	I	3162.2863	3161.3712	5	52.	896	
FE	I	3144.901	3143.990	15	578.	896		FE	I	3162.473	3161.558	1	195.	378	
FE	I	3145.3946	3144.4837	6	161.	896		FE	I	3162.8620	3161.9467	12	160.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	I	3163.2458	3162.3305	5	159.	896		FE	I	3182.894	3181.974	6		896	M
FE	I	3165.2122	3164.2963	4	163.	896		FE	I	3182.9762	3182.0558	6	159.	896	
FE	I	3165.9152	3164.9992	5	162.	896		FE	I	3183.8980	3182.9774	10	100.	896	
FE	I	3165.9176	3165.0016	5	155.	896		FE	I	3184.371	3183.450	5		896	M
FE	I	3166.7740	3165.8578	6	160.	896		FE	I	3184.499	3183.578	3	192.1	896	
FE	I	3167.175	3166.259	2	155.	378		FE	I	3185.033	3184.112	1	711.	378	
FE	I	3167.3517	3166.4353	15	259.	896		FE	I	3185.5426	3184.6216	5	155.	896	
FE	I	3167.898	3166.982	1	455.	378		FE	I	3185.8157	3184.8947	125	7.	896	
FE	I	3168.708	3167.792	1	99.	378		FE	I	3187.736	3186.814	1	100.	378	
FE	I	3168.840	3167.923	6	578.	896		FE	I	3188.092	3187.171	1	333.	378	
FE	I	3169.379	3168.462	3		896	M	FE	I	3188.947	3188.026	2		378	
FE	I	3169.517	3168.600	3		896	M	FE	I	3189.4901	3188.5681	10	159.	896	
FE	I	3169.7708	3168.8538	3	160.	896		FE	I	3189.742	3188.820	15	159.	896	
FE	I	3172.2606	3171.3429	10	52.	896		FE	I	3190.9385	3190.0162	1	259.	896	
FE	I	3172.2689	3171.3513	10	548.	896		FE	I	3191.5721	3190.6496	3	548.	896	
FE	I	3172.5810	3171.6633	3	160.	896		FE	I	3191.7385	3190.8159	5	548.	896	
FE	I	3172.981	3172.067	2	99.	605		FE	I	3192.0357	3191.1131	1	258.	896	
FE	I	3173.0016	3172.0838	5	99.	896		FE	I	3192.100	3191.180	M	452.	605	
FE	I	3173.210	3172.292	1	312.	378		FE	I	3192.5819	3191.6591	155	8.	896	
FE	I	3174.329	3173.410	4	333.	896		FE	I	3193.3356	3192.4127	5	100.	896	
FE	I	3174.5260	3173.6078	6	333.	896		FE	I	3193.430	3192.507	6		896	
FE	I	3174.608	3173.690	8	101.	896		FE	I	3193.486	3192.563	5		896	M
FE	I	3176.233	3175.314	5		896		FE	I	3193.7239	3192.8009	6	155.	896	
FE	I	3176.3641	3175.4454	80	155.	896		FE	I	3193.7656	3192.8426	6	452.	896	
FE	I	3176.89	3175.97	1	333.	605		FE	I	3194.1490	3193.2258	220	7.	896	
FE	I	3177.197	3176.278	1	578.	378		FE	I	3194.2224	3193.2992	280	159.	896	
FE	I	3177.2801	3176.3612	4	258.	896		FE	I	3194.649	3193.726	0	682.	378	
FE	I	3178.46	3177.54	2	159.	605		FE	I	3195.3478	3194.4244	6	155.	896	
FE	I	3178.8783	3177.9590	20	159.	896		FE	I	3196.892	3195.968	1	192.	378	
FE	I	3178.9326	3178.0133	20	156.	896		FE	I	3197.0461	3196.1223	5	333.	896	
FE	I	3179.231	3178.312	3		896	M	FE	I	3197.8522	3196.9281	140	155.	896	
FE	I	3179.4569	3178.5375	4	454.	896		FE	I	3197.9110	3196.9869	50	8.	896	
FE	I	3179.8823	3178.9627	15	192.1	896		FE	I	3198.444	3197.520	5	711.	896	
FE	I	3180.396	3179.479	1	52.	605		FE	I	3199.187	3198.266	1	258.	605	
FE	I	3180.45	3179.53	6	52.	896		FE	I	3200.4243	3199.4996	80	7.	896	
FE	I	3181.1434	3180.2236	50	155.	896		FE	I	3200.4556	3199.5309	80	156.	896	
FE	I	3181.6754	3180.7554	50	7.	896		FE	I	3200.845	3199.920	1	156.	378	
FE	I	3182.4415	3181.5213	8	258.	896		FE	I	3201.242	3200.317	4		896	M
FE	I	3182.7666	3181.8463	5	333.	896		FE	I	3201.396	3200.471	60	155.	896	
FE	I	3182.8329	3181.9126	5	155.	896		FE	I	3201.7097	3200.7847	12	8.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	I	3202.813	3201.891	M	6	159.	605	FE	I	3226.943	3226.012	2		378	
FE	I	3203.4830	3202.5575		3	547.	896	FE	I	3227.6449	3226.7133	6	8.	896	
FE	I	3203.787	3202.862		1		896	FE	I	3227.991	3227.063	3	156.	605	
FE	I	3205.232	3204.306		50	155.	378	FE	I	3228.7278	3227.7959	80	157.	896	
FE	I	3206.3248	3205.3985				896	FE	I	3228.9276	3227.9956	5	379.	896	
FE	I	3206.708	3205.782		1	252.	378	FE	I	3229.1810	3228.2490	20	157.	896	
FE	I	3208.0016	3207.0749		5	159.	896	FE	I	3229.833	3228.901	6	157.	896	
FE	I	3208.572	3207.649		1	382.	605	FE	I	3230.0530	3229.1207	40	8.	896	
FE	I	3209.397	3208.470		8	711.	896	FE	I	3230.527	3229.595	2	333.	378	
FE	I	3210.039	3209.115		3	97.	1015	FE	I	3230.729	3229.797	10	247.	896	
FE	I	3210.225	3209.298		40	333.	896	FE	I	3230.927	3229.994	0	546.	896	
FE	I	3211.1568	3210.2293		30	159.	896	FE	I	3231.018	3230.085	1	27.	378	
FE	I	3211.7556	3210.8280		40	156.	896	FE	I	3231.1401	3230.2076	20	158.	896	
FE	I	3212.4129	3211.4851		12	162.	896	FE	I	3231.8958	3230.9631	40	157.	896	
FE	I	3212.536	3211.608		5		896	FE	I	3232.289	3231.356	1		378	
FE	I	3212.603	3211.675		50	711.	896	FE	I	3232.506	3231.576	1	50.	605	
FE	I	3212.804	3211.876		100	98.	896	FE	I	3233.088	3232.155	1	258.	378	
FE	I	3212.9138	3211.9859		6	158.	896	FE	I	3233.984	3233.051	80	620.	896	
FE	I	3213.089	3212.161		4		896	FE	I	3234.234	3233.304	1	142.	605	
FE	I	3214.664	3213.735		40	452.	896	FE	I	3234.9010	3233.9675	50	158.	896	
FE	I	3214.9395	3214.0111		140	156.	896	FE	I	3235.5466	3234.6130	110	8.	896	
FE	I	3215.3241	3214.3956		140	7.	896	FE	I	3236.246	3235.312	1	309.	378	
FE	I	3215.550	3214.624		1	143.	605	FE	I	3236.522	3235.592	1	308.	605	
FE	I	3216.340	3215.411		5		896	FE	I	3236.767	3235.833	1		378	
FE	I	3216.562	3215.637		3	332.	605	FE	I	3237.1562	3236.2222	170	7.	896	
FE	I	3216.8669	3215.9380		60	156.	896	FE	I	3238.161	3237.227	4	256.	896	
FE	I	3218.3063	3217.3770		50	157.	896	FE	I	3239.247	3238.313	0	545.	378	
FE	I	3220.116	3219.187		1	141.	378	FE	I	3239.467	3238.535	M	397.	605	
FE	I	3220.5120	3219.5827		80	156.	896	FE	I	3239.9473	3239.0125	5	141.	896	
FE	I	3220.8962	3219.7664		60	8.	896	FE	I	3239.9775	3239.0427	5	172.	896	
FE	I	3220.7343	3219.8044		60	158.	896	FE	I	3240.3676	3239.4328	100	157.	896	
FE	I	3222.8457	3221.9153		6	156.	896	FE	I	3240.3920	3239.4572	100	157.	896	
FE	I	3222.9757	3222.0452		170	451.	896	FE	I	3240.945	3240.013	1	545.	605	
FE	I	3222.9971	3222.0666		170	156.	896	FE	I	3241.080	3240.145	0	158.	378	
FE	I	3224.010	3223.080		0	682.	378	FE	I	3242.437	3241.502	0	27.	378	
FE	I	3224.203	3223.272		4	51.	896	FE	I	3243.200	3242.268	1	255.	605	
FE	I	3224.411	3223.480		1		378	FE	I	3244.0435	3243.1077	4	192.	896	
FE	I	3224.7714	3223.8405		3	27.	896	FE	I	3244.340	3243.404	8	710.	896	
FE	I	3226.5385	3225.6071		6	192.	896	FE	I	3245.1230	3244.1869	80	156.	896	
FE	I	3226.716	3225.785		240	155.	896	FE	I	3246.9018	3245.9653	4	27.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3246.9412	3246.0047	80	8.	896		FE	I	3270.1709	3269.2285	3	710.	896	
FE	I	3247.4168	3246.4802	6	252.	896		FE	I	3270.358	3269.416	2		378	
FE	I	3247.8970	3246.9602	12	95.	896		FE	I	3270.8863	3269.9437	3	90.	896	
FE	I	3248.148	3247.210	5		896		FE	I	3271.9425	3270.9997	50	91.	896	
FE	I	3248.2159	3247.2790	10	157.	896	M	FE	I	3272.4278	3271.4848	5	680.	896	
FE	I	3249.1417	3248.2047	8	157.	896		FE	I	3272.6260	3271.6829	5	49.	896	
FE	I	3249.972	3249.037	1	308.	605		FE	I	3273.539	3272.596	2	95.	378	
FE	I	3250.1291	3249.1918	6	253.	896		FE	I	3273.649	3272.710	1	712.	605	
FE	I	3250.442	3249.504	1	51.	378		FE	I	3275.394	3274.450	5	710.	896	
FE	I	3251.3092	3250.3716	15	142.	896		FE	I	3276.6158	3275.6718	3	308.	896	
FE	I	3251.3335	3250.3959	15	379.	896		FE	I	3276.7846	3275.8406	3	450.1	896	
FE	I	3251.5605	3250.6229	12	95.	896		FE	I	3277.4138	3276.4696	5	90.	896	
FE	I	3251.65J	3250.760	5		896	M	FE	I	3277.922	3276.978	0.	51.	378	
FE	I	3252.1713	3251.2335	15	93.	896		FE	I	3279.6751	3278.7303	8	250.	896	
FE	I	3253.8525	3252.9142	8	252.	896		FE	I	3279.6851	3278.7403	8	144.	896	
FE	I	3254.5387	3253.6003	10	681.	896		FE	I	3280.6750	3279.7299	4	449.	896	
FE	I	3254.7634	3253.8249	8	250.	896		FE	I	3281.2045	3280.2593	50	620.	896	
FE	I	3254.8817	3253.9431	3	257.	896		FE	I	3281.6927	3280.7473	4	451.	896	
FE	I	3255.197	3254.261	1	249.	605		FE	I	3282.770	3281.824	1	50.	378	
FE	I	3255.2994	3254.3608	60	620.	896		FE	I	3283.6623	3282.7165	3	449.	896	
FE	I	3255.6653	3254.7265	5	308.	896		FE	I	3283.8361	3282.8903	10	680.	896	
FE	I	3258.1513	3257.2119	5	27.	896		FE	I	3284.3640	3283.4180	4	27.	896	
FE	I	3258.1752	3257.2358	5	451.	896		FE	I	3284.489	3283.543	4		896	
FE	I	3258.5317	3257.5923	12	90.	896		FE	I	3285.5335	3284.5872	8	91.	896	M
FE	I	3259.567	3258.627	1	157.	378		FE	I	3286.1401	3285.1936	5	396.	896	
FE	I	3260.9294	3259.9894	8	157.	896		FE	I	3286.9625	3286.0158	5	90.	896	
FE	I	3261.2069	3260.2668	6	250.	896		FE	I	3287.3918	3286.4450	4	710.	896	
FE	I	3262.2659	3261.3255	4	712.	896		FE	I	3287.6977	3286.7508	125	91.	896	
FE	I	3262.742	3261.801	0		378		FE	I	3288.0369	3287.0900	8	396.	896	
FE	I	3262.9492	3262.0086	5	710.	896		FE	I	3289.5962	3288.6488	4	144.	896	
FE	I	3263.214	3262.274	3		896		FE	I	3289.637	3288.690	3	144.	896	
FE	I	3264.3087	3263.3678	6	144.	896		FE	I	3289.9122	3288.9648	5	90.	896	
FE	I	3264.428	3263.487	0	50.	378		FE	I	3290.3802	3289.4327	2	380.	896	
FE	I	3264.624	3263.683	0	680.	378		FE	I	3291.6583	3290.7104	4	90.	896	
FE	I	3265.4533	3264.5121	8	90.	896		FE	I	3291.9358	3290.9879	12	95.	896	
FE	I	3265.6369	3264.6957	4	157.	896		FE	I	3292.358	3291.410	0	954.	378	
FE	I	3265.9879	3265.0465	80	8.	896		FE	I	3292.9688	3292.0207	40	680.	896	
FE	I	3266.5580	3265.6166	50	91.	896		FE	I	3293.5376	3292.5893	20	91.	896	
FE	I	3266.865	3265.923	4		896	M	FE	I	3294.0887	3293.1402	6	51.	896	
FE	I	3269.1748	3268.2326	8	95.	896		FE	I	3297.4134	3296.4640	4	250.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3297.7525	3296.8031	3	619.	896		FE	I	3325.140	3324.184	5		896	M
FE	I	3299.0814	3298.1316	15	90.	896		FE	I	3325.3259	3324.3695	15	617.	896	
FE	I	3299.487	3298.537	1	710.	378		FE	I	3325.441	3324.485	4		896	M
FE	I	3300.026	3299.076	3	710.	896		FE	I	3325.4934	3324.5369	12	191.	896	
FE	I	3300.4563	3299.5062	3	49.	896		FE	I	3326.4214	3325.4647	6	191.	896	
FE	I	3302.1681	3301.2176	4	380.	896		FE	I	3327.539	3326.582	4		896	M
FE	I	3302.392	3301.441	4		896	M	FE	I	3328.4525	3327.4953	5	190.	896	
FE	I	3302.8635	3301.9128	4	617.	896		FE	I	3328.9089	3327.9516	5	86.	896	
FE	I	3304.481	3303.529	4		896	M	FE	I	3329.245	3328.287	4		896	M
FE	I	3304.5196	3303.5684	5	449.	896		FE	I	3329.653	3328.696	5		896	M
FE	I	3304.725	3303.774	4		896	M	FE	I	3329.8233	3328.8658	25	617.	896	
FE	I	3305.298	3304.346	1	710.	378		FE	I	3330.4806	3329.5229	5	542.1	896	
FE	I	3306.9217	3305.9700	110	91.	896		FE	I	3330.927	3329.970	1		378	
FE	I	3307.2949	3306.3430	140	544.	896		FE	I	3331.164	3330.206	1	378.	378	
FE	I	3307.3090	3306.3571	140	91.	896		FE	I	3331.273	3330.316	1		378	
FE	I	3307.4329	3306.4810	6	680.	896		FE	I	3332.5700	3331.6117	6	191.	896	
FE	I	3307.652	3306.706	M	396.	605		FE	I	3332.7343	3331.7760	5	144.	896	
FE	I	3307.9575	3307.0055	5	450.	896		FE	I	3335.100	3334.141	6		896	M
FE	I	3308.096	3307.144	5		896	M	FE	I	3335.1777	3334.2188	8	190.	896	
FE	I	3308.1852	3307.2331	25	617.	896		FE	I	3335.2323	3334.2734	5	617.	896	
FE	I	3308.638	3307.685	5		896	M	FE	I	3336.3512	3335.3920	4	246.	896	
FE	I	3311.2944	3310.3415	10	449.	896		FE	I	3336.4689	3335.5097	12	49.	896	
FE	I	3311.4432	3310.4903	4	679.	896		FE	I	3336.674	3335.714	5	307.	896	
FE	I	3312.4022	3311.4491	3	27.	896		FE	I	3336.7274	3335.7680	6	379.	896	
FE	I	3313.1759	3312.2226	3	450.1	896		FE	I	3337.2162	3336.2567	5	618.	896	
FE	I	3314.509	3313.555	0		378		FE	I	3338.6240	3337.6642	12	304.	896	
FE	I	3314.6683	3313.7146	3	50.	896		FE	I	3338.875	3337.915	1		378	
FE	I	3315.0185	3314.0647	3	736.	896		FE	I	3339.5809	3338.6208	5	396.	896	
FE	I	3315.3970	3314.4431	3	250.	896		FE	I	3340.1548	3339.1946	5	190.	896	
FE	I	3315.6952	3314.7412	40	680.	896		FE	I	3340.5380	3339.5777	4	502.	896	
FE	I	3316.118	3315.164	1	618.	378		FE	I	3341.5248	3340.5643	8	139.	896	
FE	I	3317.512	3316.558	1	86.	378		FE	I	3342.8669	3341.9060	15	303.	896	
FE	I	3317.659	3316.704	4		896	M	FE	I	3343.101	3342.140	4		896	M
FE	I	3318.0753	3317.1207	5	139.	896		FE	I	3343.1752	3342.2142	6	137.	896	
FE	I	3319.986	3319.031	5		896	M	FE	I	3343.2536	3342.2926	6	378.	896	
FE	I	3320.2074	3319.2522	8	449.	896		FE	I	3344.1974	3343.2361	4	88.	896	
FE	I	3321.370	3320.415	3		896	M	FE	I	3344.469	3343.508	4		896	M
FE	I	3321.6001	3320.6447	5	190.	896		FE	I	3344.638	3343.678	3	449.	1015	
FE	I	3321.7312	3320.7756	5	396.	896		FE	I	3344.721	3343.760	4		896	M
FE	I	3323.427	3322.471	10	396.	896		FE	I	3345.040	3344.078	0	450.	378	

SPECTRUM		VACUUM WAVELENG*	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3345.900	3344.938	6		896	M	FE	I	3371.7512	3370.7829	110	304.	896	
FE	I	3346.639	3345.679	3	141.	1015		FE	I	3372.454	3371.485	4		896	M
FE	I	3347.8968	3346.9346	8	87.	896		FE	I	3373.0409	3372.0723	6	83.	896	
FE	I	3348.4605	3347.4982	4	449.	896		FE	I	3373.3118	3372.3432	4	447.	896	
FE	I	3348.8875	3347.9251	8	138.	896		FE	I	3373.825	3372.856	4		896	M
FE	I	3350.6901	3349.7273	4	377.	896		FE	I	3374.8387	3373.8696	4	303.	896	
FE	I	3351.2194	3350.2564	4	191.	896		FE	I	3375.160	3374.191	3	89.	896	
FE	I	3352.4852	3351.5219	6	89.	896		FE	I	3375.412	3374.443	3		896	M
FE	I	3352.7067	3351.7433	8	304.	896		FE	I	3376.693	3375.724	1		378	
FE	I	3353.0848	3352.9211	4	190.	896		FE	I	3377.459	3376.489	6		896	M
FE	I	3354.2245	3353.2607	3	190.	896		FE	I	3378.947	3377.977	15		896	
FE	I	3355.0238	3354.0598	6	378.	896		FE	I	3379.6488	3378.6785	50	301.	896	
FE	I	3356.1918	3355.2275	200	617.	896		FE	I	3379.702	3378.732	3	137.	896	
FE	I	3356.4817	3355.5173	80	25.	896		FE	I	3379.9887	3379.0184	25	85.	896	
FE	I	3357.2841	3356.3196	5	25.	896		FE	I	3380.974	3380.004	3	709.	1015	
FE	I	3357.3657	3356.4011	5	137.	896		FE	I	3381.0803	3380.1097	50	304.	896	
FE	I	3357.649	3356.685	4		896		FE	I	3381.719	3380.748	3		896	
FE	I	3358.788	3357.823	0	448.	378		FE	I	3382.2968	3381.3259	3	677.	896	
FE	I	3359.876	3358.911	2		378		FE	I	3382.469	3381.498	1	49.	378	
FE	I	3360.4523	3359.4870	4	25.	896		FE	I	3382.961	3381.990	1		378	
FE	I	3360.7731	3359.8077	4	617.	896		FE	I	3383.3732	3382.4019	10	84.	896	
FE	I	3361.426	3360.461	5		896	M	FE	I	3383.434	3382.463	4		896	M
FE	I	3361.8929	3360.9272	4	142.	896		FE	I	3383.607	3382.716	4		896	
FE	I	3362.9149	3361.9489	10	377.	896		FE	I	3384.358	3383.387	3	245.	1015	
FE	I	3363.233	3362.267	4		896	M	FE	I	3384.6634	3383.6919	20	85.	896	
FE	I	3364.371	3363.405	4		896	M	FE	I	3384.9502	3383.9785	60	83.	896	
FE	I	3364.7770	3363.8105	4	307.	896		FE	I	3385.737	3384.765	1	25.	378	
FE	I	3365.368	3364.402	1		378		FE	I	3386.408	3385.436	5		896	M
FE	I	3365.5993	3364.6326	4	245.	896		FE	I	3386.517	3385.545	4		896	M
FE	I	3367.7532	3366.7860	30	302.	896		FE	I	3388.3787	3387.4062	12	306.	896	
FE	I	3367.8320	3366.8647	30	87.	896		FE	I	3388.590	3387.618	4		896	M
FE	I	3368.1238	3367.1564	5	142.	896		FE	I	3389.591	3388.618	3		896	M
FE	I	3369.140	3368.172	5	678.	896		FE	I	3389.9408	3388.9678	8	502.	896	
FE	I	3369.9390	3368.9712	5	376.	896		FE	I	3390.7158	3389.7426	12	87.	896	
FE	I	3370.1074	3369.1395	5	191.	896		FE	I	3391.601	3390.627	4		896	M
FE	I	3370.5142	3369.5463	60	304.	896		FE	I	3392.9827	3392.0090	10	499.	896	
FE	I	3371.049	3370.081	5		896	M	FE	I	3393.2775	3392.3037	50	83.	896	
FE	I	3371.223	3370.254	0	542.	378		FE	I	3393.6252	3392.6514	125	85.	896	
FE	I	3371.528	3370.560	3		896	M	FE	I	3393.960	3392.986	6		896	M
FE	I	3371.581	3370.613	3		896	M	FE	I	3394.3521	3393.3781	5	376.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	I	3394.564	3393.590	1	305.	378		FE	I	3412.1050	3411.1264	6	299.	896	
FE	I	3394.597	3393.623	2	376.	378		FE	I	3412.3314	3411.3528	15	301.	896	
FE	I	3394.8898	3393.9156	4	136.	896		FE	I	3414.1103	3413.1312	155	85.	896	
FE	I	3395.0513	3394.0771	4	188.	896		FE	I	3415.481	3414.501	12		896	M
FE	I	3395.5576	3394.5833	20	81.	896		FE	I	3415.543	3414.564	1		378	
FE	I	3396.054	3395.080	1		378		FE	I	3415.743	3414.764	5		896	M
FE	I	3397.3525	3396.3777	4	25.	896		FE	I	3416.5096	3415.5299	12	83.	896	
FE	I	3397.9509	3396.9759	5	26.	896		FE	I	3417.263	3416.283	5		896	M
FE	I	3398.1805	3397.2055	5	503.	896		FE	I	3417.6575	3416.6775	4	142.	896	
FE	I	3398.5272	3397.5521	5	447.	896		FE	I	3418.111	3417.131	5		896	M
FE	I	3398.6136	3397.6385	5	26.	896		FE	I	3418.251	3417.273	3	26.	1015	
FE	I	3399.1913	3398.2161	5	304.	896		FE	I	3418.8211	3417.8408	40	81.	896	
FE	I	3399.601	3398.625	5		896		FE	I	3419.145	3418.164	10	577.	896	
FE	I	3399.799	3398.824	5		896	M	FE	I	3419.489	3418.508	40	81.	896	
FE	I	3400.132	3399.156	4		896	M	FE	I	3419.847	3418.867	5		896	M
FE	I	3400.2051	3399.2296	5	302.	896		FE	I	3419.886	3418.905	1		378	
FE	I	3400.3090	3399.3335	125	85.	896		FE	I	3420.127	3419.146	5	576.	896	
FE	I	3401.018	3400.042	4		896	M	FE	I	3420.6750	3419.6943	4	377.	896	
FE	I	3401.638	3400.662	1		378		FE	I	3423.100	3422.118	4		896	
FE	I	3401.983	3401.007	1		378		FE	I	3423.474	3422.493	15	444.	896	
FE	I	3402.4945	3401.5184	10	26.	896		FE	I	3423.6378	3422.6563	30	85.	896	
FE	I	3403.231	3402.255	20	614.	896		FE	I	3424.553	3423.571	4		896	
FE	I	3404.2805	3403.3039	5	304.	896		FE	I	3425.2660	3424.2840	60	81.	896	
FE	I	3405.2467	3404.2699	5	25.	896		FE	I	3425.9925	3425.0104	20	541.	896	
FE	I	3405.2775	3404.3007	5	301.	896		FE	I	3426.655	3425.672	4		896	M
FE	I	3405.3304	3404.3535	80	83.	896		FE	I	3427.3081	3426.3257	12	135.	896	
FE	I	3405.736	3404.759	15	300.	896		FE	I	3427.3618	3426.3793	20	25.	896	
FE	I	3405.867	3404.890	5	300.	896		FE	I	3427.3697	3426.3872	20	82.	896	
FE	I	3406.550	3405.572	5		896	M	FE	I	3427.6110	3426.6285	25	82.	896	
FE	I	3406.8091	3405.8319	10	299.	896		FE	I	3427.649	3426.666	6	615.	896	
FE	I	3407.4139	3406.4365	8	676.	896		FE	I	3427.9708	3426.9882	5		896	
FE	I	3407.7773	3406.7999	25	85.	896		FE	I	3428.1019	3427.1192	220	26.	896	
FE	I	3408.4361	3407.4585	220	83.	896		FE	I	3428.176	3427.193	10		896	M
FE	I	3408.508	3407.530	4	81.	896		FE	I	3428.817	3427.834	4		896	M
FE	I	3410.1863	3409.2082	4	614.	896		FE	I	3428.994	3428.011	5	616.	896	
FE	I	3410.583	3409.605	1	188.	378		FE	I	3429.1755	3428.1925	4	81.	896	
FE	I	3411.0053	3410.0270	4	542.	896		FE	I	3429.211	3428.228	5		896	M
FE	I	3411.1466	3410.1683	12	735.	896		FE	I	3429.391	3428.409	5	302.	896	
FE	I	3411.559	3410.581	0	244.	378		FE	I	3429.435	3428.452	5		896	M
FE	I	3411.8742	3410.8957	5	25.	896		FE	I	3429.481	3428.498	6		896	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	I	3429.7316	3428.7485	60	836.	896		FE	I	3463.344	3462.353	6	79.	1015	
FE	I	3430.474	3429.491	20		896	M	FE	I	3464.296	3463.305	6	48.	1015	
FE	I	3430.792	3429.808	1	540.	378		FE	I	3465.905	3464.914	3	241.	1015	
FE	I	3432.7973	3431.8135	8	376.	896		FE	I	3466.855	3465.863	180	6.	1015	
FE	I	3432.8270	3431.8431	8	676.	896		FE	I	3467.271	3466.279	3	185.	1015	
FE	I	3434.552	3433.568	8		896	M	FE	I	3467.493	3466.501	9	24.	1015	
FE	I	3435.011	3434.029	3	300.	1015		FE	I	3468.679	3467.686	1	442.	378	
FE	I	3435.944	3434.960	1	776.	378		FE	I	3470.004	3469.012	6	614.	1015	
FE	I	3437.0213	3436.0363	6	614.	896		FE	I	3470.271	3469.278	0		378	
FE	I	3437.452	3436.467	5		896	M	FE	I	3470.827	3469.834	6	242.	1015	
FE	I	3438.030	3437.045	12	539.	896		FE	I	3472.26	3471.27	15	82.	1015	
FE	I	3438.6097	3437.6243	5	187.	896		FE	I	3472.343	3471.350	18	130.	1015	
FE	I	3438.9342	3437.9488	6	614.	896		FE	I	3474.013	3473.015	0	576.	378	
FE	I	3439.293	3438.308	12		896		FE	I	3474.297	3473.303	2		378	
FE	I	3440.0217	3439.0360	6	299.	896		FE	I	3474.491	3473.497	3	26.	1015	
FE	I	3440.873	3439.887	12		896	M	FE	I	3476.444	3475.450	210	6.	1015	
FE	I	3441.594	3440.610	450	6.	1015		FE	I	3476.645	3475.651	18	78.	1015	
FE	I	3441.973	3440.989	225	6.	1015		FE	I	3476.861	3475.867	3	186.	1015	
FE	I	3443.349	3442.364	15	134.	1015		FE	I	3477.331	3476.336	6	133.	1015	
FE	I	3443.657	3442.672	9	26.	1015		FE	I	3477.331	3476.336	6	835.	1015	
FE	I	3443.964	3442.979	3	499.	1015		FE	I	3477.699	3476.704	120	6.	1015	
FE	I	3444.863	3443.878	150	6.	1015		FE	I	3477.848	3476.853	6	242.	1015	
FE	I	3446.137	3445.151	60	81.	1015		FE	I	3478.002	3477.007	3	139.	1015	
FE	I	3447.777	3446.791	3	244.	1015		FE	I	3478.845	3477.850	6	82.	1015	
FE	I	3447.933	3446.947	3	26.	1015		FE	I	3479.377	3478.382	3	185.	1015	
FE	I	3448.264	3447.278	24	82.	1015		FE	I	3479.783	3478.788	3	137.	1015	
FE	I	3449.179	3448.190	1	186.	378		FE	I	3480.679	3479.683	3	812.	1015	
FE	I	3449.465	3448.478	3	444.	1015		FE	I	3482.288	3481.292	1	499.	378	
FE	I	3449.856	3448.869	3	242.	1015		FE	I	3482.554	3481.558	3	132.	1015	
FE	I	3451.315	3450.328	30	82.	1015		FE	I	3484.002	3483.006	9	24.	1015	
FE	I	3452.616	3451.628	6	139.	1015		FE	I	3485.84	3484.84	3	185.	1015	
FE	I	3452.903	3451.915	30	81.	1015		FE	I	3485.97	3484.97	3	138.	1015	
FE	I	3453.261	3452.273	30	25.	1015		FE	I	3486.339	3485.342	21	78.	1015	
FE	I	3454.010	3453.022	6	301.	1015		FE	I	3487.554	3486.556	3	79.	1015	
FE	I	3457.364	3456.374	1	375.	378		FE	I	3488.136	3487.138	0		378	
FE	I	3458.079	3457.090	9	835.	1015		FE	I	3489.847	3488.849	12	242.	1015	
FE	I	3458.501	3457.512	3	187.	1015		FE	I	3491.574	3490.575	300	6.	1015	
FE	I	3459.293	3458.304	12	139.	1015		FE	I	3494.29	3493.29	3	48.	1015	
FE	I	3460.419	3459.429	6	297.	1015		FE	I	3494.69	3493.69	6	297.	1015	
FE	I	3460.901	3459.911	12	501.	1015		FE	I	3495.15	3494.15	3	137.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	II	2043.96	2043.31	0		645		FE	II	2098.176	2097.512	250	120.	488	H
FE	II	2044.451	2043.79	50		645		FE	II	2098.176	2097.512	250	80.	488	H
FE	II	2048.375	2047.71	10		645		FE	II	2100.110	2099.445	10		645	
FE	II	2049.148	2048.49	50	121.	488	H	FE	II	2101.628	2100.963	50	250.	488	
FE	II	2051.685	2051.02	250	93.	488	H	FE	II	2102.363	2101.698	10		292	
FE	II	2052.023	2051.36	0		645		FE	II	2108.222	2107.555	100	250.	488	
FE	II	2054.383	2053.72	0		645		FE	II	2108.529	2107.862	10		292	
FE	II	2055.641	2054.98	10		645		FE	II	2108.806	2108.139	150	81.	488	H
FE	II	2055.927	2055.27	200	109.	488		FE	II	2109.610	2108.942	250	227.	488	
FE	II	2057.989	2057.33	120	82.	488	H	FE	II	2109.765	2109.097	100	227.	488	
FE	II	2058.762	2058.104	0		292		FE	II	2109.765	2109.097	100	250.	488	
FE	II	2059.663	2059.005	0		645		FE	II	2110.908	2110.240	250	290.	488	
FE	II	2062.747	2062.088	0		292		FE	II	2111.401	2110.732	2	108.	896	H
FE	II	2064.331	2063.672	250	92.	488	H	FE	II	2112.815	2112.146	0		645	
FE	II	2066.663	2066.005	150	109.	488		FE	II	2114.774	2114.107	0		645	
FE	II	2067.413	2066.755	0		645		FE	II	2116.090	2115.422	2		645	
FE	II	2068.576	2067.917	200	137.	488	H	FE	II	2116.343	2115.675	0		645	
FE	II	2070.611	2069.952	100	273.	488		FE	II	2117.628	2116.960	250	213.	488	
FE	II	2070.989	2070.330	80	273.	488		FE	II	2118.114	2117.446	0		645	
FE	II	2072.481	2071.821	100	107.	488	H	FE	II	2118.864	2118.195	80	120.	488	H
FE	II	2073.231	2072.571	10		645		FE	II	2119.719	2119.050	120	120.	488	H
FE	II	2073.807	2073.147	80	81.	488	H	FE	II	2120.328	2119.659	0		645	
FE	II	2073.847	2073.187	0		645		FE	II	2123.126	2122.456	0		292	
FE	II	2074.856	2074.195	80	91.	488	H	FE	II	2126.098	2125.427	6		645	
FE	II	2075.768	2075.107	20		645		FE	II	2127.691	2127.020	10		645	
FE	II	2076.344	2075.683	50	107.	488		FE	II	2128.639	2127.967	100	290.	488	
FE	II	2078.169	2077.507	120	136.	488		FE	II	2130.931	2130.259	150	80.	488	H
FE	II	2078.826	2078.164	80	91.	488	H	FE	II	2131.201	2130.528	120	249.	645	
FE	II	2080.905	2080.242	5	92.	896	H	FE	II	2132.054	2131.383	0		645	
FE	II	2081.947	2081.284	2		896		FE	II	2133.175	2132.504	30		645	
FE	II	2083.801	2083.139	0		645		FE	II	2133.208	2132.537	20	272.	488	
FE	II	2084.174	2083.512	0	273.	488		FE	II	2134.662	2133.990	80	213.	488	
FE	II	2086.939	2086.276	0		292		FE	II	2135.249	2134.577	20		645	
FE	II	2088.206	2087.542	8	108.	896	H	FE	II	2135.264	2134.592	20	212.	488	
FE	II	2089.515	2088.852	10		645		FE	II	2135.264	2134.592	20	226.	488	
FE	II	2094.286	2093.621	60		645		FE	II	2135.955	2135.283	6		645	
FE	II	2094.377	2093.711	50	290.	896		FE	II	2137.177	2136.505	200	249.	645	
FE	II	2095.308	2094.641	10	107.	488		FE	II	2138.408	2137.735	150	6.	488	H
FE	II	2095.650	2094.985	20	91.	488		FE	II	2138.776	2138.103	200	135.	488	
FE	II	2097.656	2096.990	0	91.	488		FE	II	2139.542	2138.869	6		645	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2140.349	2139.676	250	6.	488	H	FE	II	2168.081	2167.401	120	119.	488	
FE	II	2140.855	2140.181	4		645		FE	II	2168.558	2167.880	120	213.	488	
FE	II	2141.288	2140.612	10	212.	488		FE	II	2169.408	2168.730	4		645	
FE	II	2141.710	2141.036	50		645		FE	II	2169.603	2168.925	80	247.	488	
FE	II	2142.428	2141.754	20		645		FE	II	2169.848	2169.169	20		645	
FE	II	2142.694	2142.020	10		645		FE	II	2170.110	2169.431	100	370.	488	
FE	II	2146.733	2146.058	100	6.	488	H	FE	II	2170.548	2169.869	0		645	
FE	II	2147.049	2146.374	10		292		FE	II	2170.629	2169.950	120	370.	488	
FE	II	2148.379	2147.702	2	213.	896	H	FE	II	2170.872	2170.193	50	372.	488	
FE	II	2151.298	2150.621	5	135.	896	H	FE	II	2172.229	2171.550	10	372.	488	
FE	II	2151.437	2150.762	100	248.	488	H	FE	II	2172.735	2172.056	10	372.	488	
FE	II	2151.770	2151.095	250	106.	488	H	FE	II	2173.359	2172.679	80	372.	488	
FE	II	2153.048	2152.373	120	106.	488	H	FE	II	2173.6LJ	2172.989	150	134.	488	H
FE	II	2153.157	2152.480	2	151.	896	H	FE	II	2173.900	2173.220	200	248.	488	
FE	II	2153.957	2153.281	50	225.	488		FE	II	2174.400	2173.720	150	79.	488	
FE	II	2154.290	2153.614	4		645		FE	II	2175.529	2174.849	80	135.	488	
FE	II	2154.550	2153.874	10	6.	488		FE	II	2175.788	2175.108	6		645	
FE	II	2156.19	2155.51	0		645		FE	II	2176.136	2175.454	10	90.	896	H
FE	II	2156.515	2155.839	120	213.	488		FE	II	2176.708	2176.027	10		292	
FE	II	2159.195	2158.518	250	89.	488		FE	II	2177.048	2176.367	50		292	
FE	II	2159.829	2159.152	100	6.	488		FE	II	2177.200	2176.519	40		645	
FE	II	2159.88	2159.20	0		645		FE	II	2177.507	2176.826	200	370.	488	
FE	II	2160.343	2159.665	0		645		FE	II	2177.706	2177.025	100	106.	488	H
FE	II	2161.149	2160.471	20	185.	488		FE	II	2180.522	2179.840	4		645	
FE	II	2161.453	2160.775	120		292		FE	II	2180.62	2179.94	0		645	
FE	II	2161.839	2161.159	3	213.	896	H	FE	II	2180.937	2180.255	120	370.	488	
FE	II	2161.839	2161.161	150	227.	488	H	FE	II	2181.552	2180.870	120	370.	488	
FE	II	2161.991	2161.313	200	370.	488		FE	II	2181.819	2181.137	80	370.	488	
FE	II	2161.991	2161.313	200	227.	488		FE	II	2182.049	2181.367	2		645	
FE	II	2162.260	2161.582	200	119.	488		FE	II	2182.089	2181.407	50	370.	488	
FE	II	2162.701	2162.021	15	90.	896	H	FE	II	2183.984	2183.301	120	89.	488	
FE	II	2164.049	2163.370	200	372.	488		FE	II	2184.151	2183.468	80	119.	488	
FE	II	2165.018	2164.339	200	79.	488	H	FE	II	2184.216	2183.533	20		645	
FE	II	2165.018	2164.339	200	372.	488		FE	II	2184.498	2183.815	100	247.	645	
FE	II	2165.237	2164.558	250	370.	488		FE	II	2186.306	2185.622	80	271.	488	
FE	II	2165.237	2164.558	250	213.	488		FE	II	2186.901	2186.217	4		645	
FE	II	2166.234	2165.555	100	185.	488	H	FE	II	2187.546	2186.862	30		645	
FE	II	2166.878	2166.198	200	212.	488		FE	II	2187.991	2187.309	30		645	
FE	II	2167.02	2166.34	10		645		FE	II	2188.126	2187.444	120	271.	488	
FE	II	2167.393	2166.713	80		645		FE	II	2188.360	2187.678	100	89.	488	H

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2188.550	2187.868	150	135.	488		FE	II	2223.370	2222.679	10	369.	488	
FE	II	2189.512	2188.829	10		292		FE	II	2224.179	2223.487	8	168.	896	H
FE	II	2192.619	2191.935	100	367.	488		FE	II	2224.557	2223.866	20	368.	488	
FE	II	2193.358	2192.674	50	226.	488		FE	II	2226.555	2225.859	2		645	
FE	II	2196.680	2195.995	80		645		FE	II	2228.099	2227.407	1	168.	488	
FE	II	2197.958	2197.273	50	226.	488		FE	II	2228.162	2227.469	40	369.	488	
FE	II	2199.346	2198.660	40	367.	488		FE	II	2228.290	2227.597	1	168.	488	
FE	II	2200.964	2200.278	20		645		FE	II	2229.452	2228.761	300	366.	488	
FE	II	2202.095	2201.408	0		1026		FE	II	2231.36	2230.67	0		645	
FE	II	2202.277	2201.590	5	367.	896		FE	II	2232.204	2231.512	100	368.	488	
FE	II	2202.804	2202.117	10		645		FE	II	2234.609	2233.917	5	118.	488	H
FE	II	2204.107	2203.420	10	406.	488		FE	II	2237.373	2236.680	0	4.	488	H
FE	II	2204.40	2203.71	0		645		FE	II	2238.271	2237.577	200	365.	488	
FE	II	2204.774	2204.087	2		645		FE	II	2238.588	2237.894	1	334.	488	
FE	II	2206.838	2206.150	8	367.	896		FE	II	2238.591	2237.894	0		645	
FE	II	2207.270	2206.582	20	134.	488		FE	II	2239.741	2239.047	250	365.	488	
FE	II	2208.466	2207.780	0	225.	488		FE	II	2240.332	2239.638	0	334.	488	
FE	II	2209.096	2208.407	15	367.	896		FE	II	2242.121	2241.426	200	365.	488	
FE	II	2209.723	2209.034	8	366.	896		FE	II	2244.273	2243.578	0	118.	488	H
FE	II	2211.639	2210.952	50	134.	488		FE	II	2244.912	2244.216	80	365.	488	
FE	II	2211.639	2210.952	50	118.	488		FE	II	2246.201	2245.505	450	365.	488	
FE	II	2211.799	2211.112	50	289.	488	H	FE	II	2248.389	2247.692	350	365.	488	
FE	II	2211.799	2211.112	50	168.	488	H	FE	II	2249.760	2249.063	300	365.	488	
FE	II	2211.930	2211.243	120	305.	488		FE	II	2249.760	2249.063	300	365.	488	
FE	II	2212.84	2212.15	0		645		FE	II	2249.878	2249.181	250	365.	488	H
FE	II	2213.073	2212.385	4		645		FE	II	2249.878	2249.181	250	5.	488	H
FE	II	2214.345	2213.655	20		896	H	FE	II	2250.868	2250.171	1	4.	488	H
FE	II	2214.41	2213.72	0		168.		FE	II	2251.633	2250.937	5	4.	488	H
FE	II	2214.729	2214.036	8		368.		FE	II	2252.252	2251.556	1	5.	488	H
FE	II	2215.767	2215.077	8		369.		FE	II	2252.527	2251.831	800	365.	488	
FE	II	2216.393	2215.702	4	371.	896		FE	II	2253.815	2253.119	5	4.	488	H
FE	II	2216.791	2216.102			645		FE	II	2254.762	2254.066	80	365.	488	
FE	II	2217.569	2216.880	2		645		FE	II	2255.098	2254.401	1	5.	488	H
FE	II	2217.737	2217.048	1		488		FE	II	2256.388	2255.691	500	365.	488	
FE	II	2218.952	2218.262	12	367.	896		FE	II	2256.465	2255.766	25	133.	896	H
FE	II	2220.587	2219.896	10	168.	896	H	FE	II	2256.676	2255.979	1	4.	488	H
FE	II	2221.072	2220.381	20	118.	896	H	FE	II	2257.594	2256.897	100	365.	488	
FE	II	2221.143	2220.453	60	371.	488		FE	II	2258.486	2257.788	250	365.	488	
FE	II	2221.858	2221.167	8	168.	896	H	FE	II	2260.291	2259.589	0		645	
FE	II	2223.137	2222.446	0	168.	488		FE	II	2260.776	2260.078	5	4.	488	H

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2260.926	2260.228	5	5.	488	H	FE	II	2318.064	2317.352	20	183.	896	
FE	II	2261.552	2260.853	5	4.	488	H	FE	II	2318.092	2317.380	8	183.	896	
FE	II	2263.385	2262.686	5	5.	488	H	FE	II	2319.030	2318.318	6	183.	896	
FE	II	2263.923	2263.224	5	246.	488	H	FE	II	2319.246	2318.534	5	132.	488	H
FE	II	2265.289	2264.589	5	246.	488		FE	II	2319.490	2318.778	0		1026	
FE	II	2266.691	2265.991	1	5.	488	H	FE	II	2321.425	2320.712	0		1026	
FE	II	2267.399	2266.699	1	315.	488		FE	II	2322.403	2321.690	10	183.	896	H
FE	II	2268.285	2267.584	5	4.	488	H	FE	II	2323.044	2322.331	6	183.	896	H
FE	II	2269.263	2268.562	1	5.	488	H	FE	II	2325.187	2324.473	12		896	
FE	II	2269.545	2268.844	1	5.	488	H	FE	II	2326.009	2325.296	10	183.	896	
FE	II	2273.01	2272.31	1		645		FE	II	2326.300	2325.587	8	288.	896	
FE	II	2277.079	2276.378	0	315.	488		FE	II	2328.1105	2327.3962	100	3.	896	H
FE	II	2280.61	2279.918	20	4.	488	H	FE	II	2328.590	2327.875	15		896	
FE	II	2284.695	2283.991	5	132.	488	H	FE	II	2328.675	2327.962	8	183.	896	
FE	II	2284.928	2284.224	1	105.	488		FE	II	2330.695	2329.980	5		1026	
FE	II	2286.229	2285.525	0	184.	488		FE	II	2331.772	2331.057	5	183.	896	
FE	II	2293.476	2292.770	1	315.	488		FE	II	2332.0234	2331.3082	100	35.	896	H
FE	II	2294.472	2293.765	5	184.	488	H	FE	II	2332.691	2331.975	15		896	
FE	II	2295.310	2294.603	5	184.	488		FE	II	2333.217	2332.503	0	414.	488	
FE	II	2296.816	2296.108	1		1026		FE	II	2333.5149	2332.7994	170	3.	896	H
FE	II	2297.369	2296.662	1	167.	488		FE	II	2334.424	2333.708	10		896	
FE	II	2297.476	2296.769	1	133.	488		FE	II	2335.612	2334.896	6		896	
FE	II	2298.929	2298.221	10	133.	896	H	FE	II	2336.474	2335.757	0		645	
FE	II	2302.131	2301.424	1	184.	488	H	FE	II	2337.540	2336.824	6		896	
FE	II	2304.062	2303.353	8	167.	896		FE	II	2338.7237	2338.0070	140	3.	896	H
FE	II	2304.547	2303.840	1	415.	488		FE	II	2340.125	2339.408	8	105.	896	H
FE	II	2305.444	2304.736	5	184.	488	H	FE	II	2341.068	2340.352	5	344.	488	
FE	II	2305.615	2304.906	4		896		FE	II	2341.180	2340.462	10	166.	896	H
FE	II	2307.368	2306.677	M		645		FE	II	2341.656	2340.939	5	166.	488	H
FE	II	2308.024	2307.314	6		896		FE	II	2341.892	2341.174	12		896	
FE	II	2309.477	2308.767	5		896		FE	II	2342.162	2341.444	1		1026	
FE	II	2310.801	2310.090	4		896		FE	II	2342.670	2341.953	5	314.	488	
FE	II	2311.935	2311.224	4	245.	896	H	FE	II	2342.955	2342.238	20	104.	488	H
FE	II	2312.002	2311.291	5		896		FE	II	2344.2121	2343.4941	240	3.	896	H
FE	II	2312.736	2312.024	6	105.	896	H	FE	II	2344.6780	2343.9600	80	35.	896	H
FE	II	2314.010	2313.300	5	288.	488		FE	II	2344.9990	2344.2809	125	3.	896	H
FE	II	2314.652	2313.941	6	184.	896		FE	II	2345.702	2344.984	25		896	
FE	II	2314.757	2314.046	0		1026		FE	II	2345.895	2345.177	1	287.	488	
FE	II	2316.025	2315.314	0	389.	488		FE	II	2346.057	2345.339	50	165.	896	H
FE	II	2316.748	2316.035	1		645		FE	II	2346.989	2346.271	5	314.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2346.989	2346.271	5	379.	488		FE	II	2367.586	2366.864	5	2.	488	
FE	II	2347.226	2346.508	1	379.	488		FE	II	2367.586	2366.864	5	165.	488	H
FE	II	2347.644	2346.926	0	379.	488		FE	II	2369.319	2368.595	80	36.	896	H
FE	II	2348.131	2347.411	0		645		FE	II	2369.955	2369.232	5	182.	488	H
FE	II	2348.832	2348.113	140	36.	896	H	FE	II	2370.061	2369.347	M		645	
FE	II	2349.015	2348.299	155	3.	896	H	FE	II	2370.179	2369.455	80		896	
FE	II	2350.897	2350.178	12	379.	896	H	FE	II	2370.6774	2369.9536	80	379.	896	
FE	II	2351.243	2350.523	8		896		FE	II	2371.2232	2370.4993	25	35.	896	H
FE	II	2351.920	2351.201	50	165.	896	H	FE	II	2373.357	2372.633	10	333.	896	H
FE	II	2352.386	2351.666	15	379.	896		FE	II	2373.501	2372.777	1	148.	488	
FE	II	2352.679	2351.958	0		645		FE	II	2374.4598	2373.7351	125	2.	896	H
FE	II	2353.029	2352.309	25	379.	896		FE	II	2375.114	2374.389	10		896	
FE	II	2354.190	2353.469	30		896		FE	II	2375.9135	2375.1935	60	36.	896	H
FE	II	2354.399	2353.678	15	379.	896		FE	II	2376.440	2375.714	0		645	
FE	II	2355.198	2354.477	50	165.	896	H	FE	II	2377.1550	2376.4297	110	379.	896	
FE	II	2355.610	2354.889	40	35.	896	H	FE	II	2378.851	2378.125	20		896	
FE	II	2355.936	2355.216	12	165.	896		FE	II	2379.250	2378.526	20	377.	488	
FE	II	2356.070	2355.351	40	379.	488		FE	II	2379.250	2378.526	20	270.	488	
FE	II	2357.724	2357.005	40	379.	488	H	FE	II	2379.415	2378.691	1	388.	488	
FE	II	2357.724	2357.005	40	333.	488	H	FE	II	2379.727	2379.003	20	182.	488	
FE	II	2358.958	2358.236	0		645		FE	II	2379.879	2379.155	20	211.	488	
FE	II	2359.831	2359.111	285	165.	488	H	FE	II	2379.999	2379.273	80	36.	896	H
FE	II	2359.840	2359.118	140	379.	896	H	FE	II	2380.133	2379.407	20		896	
FE	II	2359.840	2359.118	140	3.	896	H	FE	II	2380.931	2380.205	40		896	
FE	II	2359.840	2359.118	140	165.	896	H	FE	II	2381.4877	2380.7615	110	3.	896	H
FE	II	2360.317	2359.595	15	165.	896		FE	II	2382.7620	2382.0355	320	2.	896	H
FE	II	2360.719	2359.997	125	35.	896	H	FE	II	2383.081	2382.356	40	35.	488	H
FE	II	2361.014	2360.293	110	36.	896	H	FE	II	2383.624	2382.897	20	117.	896	
FE	II	2361.233	2360.511	30		896		FE	II	2383.787	2383.060	20	2.	896	H
FE	II	2362.092	2361.371	1	270.	488		FE	II	2383.9720	2383.2452	60	36.	896	H
FE	II	2362.449	2361.728	40	379.	488		FE	II	2385.1154	2384.3883	50	36.	896	H
FE	II	2362.449	2361.728	40	165.	488		FE	II	2385.732	2385.005	10	35.	896	H
FE	II	2362.742	2362.020	40	35.	896	H	FE	II	2387.113	2386.387	20	396.	488	
FE	II	2364.362	2363.641	5	165.	488		FE	II	2388.106	2387.380	20		1026	
FE	II	2364.532	2363.811	40	270.	488		FE	II	2388.150	2387.424	20	286.	488	H
FE	II	2364.582	2363.860	60	379.	896		FE	II	2388.963	2388.235	12	148.	896	
FE	II	2365.549	2364.826	140	3.	896	H	FE	II	2389.1004	2388.3725	40	117.	896	
FE	II	2366.487	2365.764	80		896		FE	II	2389.3563	2388.6283	170	2.	896	H
FE	II	2366.762	2366.040	1	287.	488		FE	II	2390.597	2389.870	5	244.	488	
FE	II	2367.315	2366.591	25	35.	896	H	FE	II	2390.8259	2390.0975	30		896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2391.038	2390.311	1	304.	488		FE	II	2411.251	2410.518	170	2.	896	H
FE	II	2391.273	2390.546	1	304.	488		FE	II	2411.8009	2411.0678	140	2.	896	H
FE	II	2391.494	2390.768	20	402.	896		FE	II	2412.5415	2411.8082	50		896	
FE	II	2392.207	2391.478	15	35.	896	H	FE	II	2412.752	2412.021	5	388.	488	
FE	II	2392.818	2392.089	10		896		FE	II	2414.0438	2413.3102	125	2.	896	H
FE	II	2393.308	2392.578	20		896		FE	II	2414.812	2414.080	5	164.	488	H
FE	II	2394.900	2394.172	1	303.	488		FE	II	2415.644	2414.912	40	206.	488	
FE	II	2395.621	2394.892	40	116.	488	H	FE	II	2415.800	2415.068	40	181.	488	H
FE	II	2396.1492	2395.4196	40	2.	896	H	FE	II	2416.509	2415.776	1	130.	488	
FE	II	2396.354	2395.624	320	2.	896	H	FE	II	2416.706	2415.973	1	376.	488	
FE	II	2397.449	2396.719	15	211.	896	H	FE	II	2417.1799	2416.4456	20	396.	896	
FE	II	2399.394	2398.664	20	402.	488		FE	II	2417.438	2416.705	5	286.	488	H
FE	II	2399.9717	2399.2413	170	36.	896	H	FE	II	2418.6054	2417.8707	80	244.	896	H
FE	II	2399.9717	2399.2413	170	2.	896	H	FE	II	2419.1717	2418.4369	15	396.	896	
FE	II	2400.229	2399.499	5	396.	488		FE	II	2419.438	2418.702	5	364.	488	
FE	II	2400.366	2399.636	1	303.	488		FE	II	2420.219	2419.485	1	364.	488	
FE	II	2400.780	2400.049	20		896		FE	II	2420.626	2419.892	5	180.	488	
FE	II	2400.977	2400.247	20	181.	488	H	FE	II	2420.724	2419.989	8	396.	896	
FE	II	2401.068	2400.338	70	244.	488	H	FE	II	2422.632	2421.898	1	116.	488	H
FE	II	2402.0226	2401.2917	15	402.	896		FE	II	2423.424	2422.688	60	301.	896	H
FE	II	2402.986	2402.255	20	181.	488	H	FE	II	2423.667	2422.932	5	115.	488	
FE	II	2403.181	2402.450	80	377.	488		FE	II	2423.946	2423.210	40	301.	896	H
FE	II	2403.328	2402.597	40	36.	488	H	FE	II	2424.235	2423.499	10	388.	896	
FE	II	2404.530	2403.799	1	378.	488		FE	II	2424.654	2423.919	5	313.	488	
FE	II	2404.698	2403.967	0	413.	488		FE	II	2424.880	2424.144	125	180.	896	H
FE	II	2405.1623	2404.4307	50	2.	896	H	FE	II	2425.126	2424.390	15	149.	896	H
FE	II	2405.617	2404.885	280	2.	896	H	FE	II	2425.320	2424.585	40	301.	488	H
FE	II	2406.4145	2405.6826	10	402.	896		FE	II	2425.329	2424.592	30	180.	896	H
FE	II	2406.750	2406.018	0	378.	488		FE	II	2426.100	2425.363	5	210.	896	H
FE	II	2406.816	2406.086	5	131.	488		FE	II	2426.422	2425.685	10	224.	896	H
FE	II	2407.393	2406.660	155	2.	896	H	FE	II	2426.640	2425.904	20	130.	488	
FE	II	2407.7072	2406.9750	80	302.	896		FE	II	2427.814	2427.077	1		1026	
FE	II	2408.495	2407.765	1	396.	488		FE	II	2427.936	2427.199	12	114.	896	H
FE	II	2408.670	2407.940	20	116.	488	H	FE	II	2428.018	2427.281	12		896	
FE	II	2409.383	2408.653	20	402.	488		FE	II	2428.815	2428.079	1	114.	488	
FE	II	2410.108	2409.377	5	150.	488	H	FE	II	2429.029	2428.292	30	301.	896	
FE	II	2410.266	2409.535	0	377.	488		FE	II	2429.101	2428.364	110	300.	896	H
FE	II	2410.439	2409.708	5	224.	488	H	FE	II	2429.538	2428.800	25	301.	896	
FE	II	2411.017	2410.286	5	376.	488		FE	II	2429.707	2428.970	60	375.	488	
FE	II	2411.017	2410.286	5	181.	488		FE	II	2429.773	2429.035	25	301.	896	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2429.889	2429.152	10	385.	896	FE	II	2444.450	2443.709	60		896
FE	II	2430.124	2429.386	20	148.	896	FE	II	2444.581	2443.842	150	375.	488
FE	II	2430.234	2429.497	20	180.	488	FE	II	2445.013	2444.274	100	375.	488
FE	II	2430.598	2429.860	30		896	FE	II	2445.256	2444.515	100	148.	896
FE	II	2430.815	2430.078	110	180.	896	FE	II	2445.847	2445.106	50	375.	896
FE	II	2430.921	2430.184	20	301.	488	FE	II	2446.314	2445.573	100	148.	896
FE	II	2431.619	2430.881	6	375.	896	FE	II	2446.538	2445.797	40	300.	896
FE	II	2431.783	2431.025	25		896	FE	II	2446.852	2446.111	50	300.	896
FE	II	2431.973	2431.236	30	375.	488	FE	II	2446.943	2446.203	0	209.	488
FE	II	2432.9995	2432.2616	80	180.	896	FE	II	2447.148	2446.407	15	375.	896
FE	II	2433.439	2432.701	5	321.	488	FE	II	2447.212	2446.471	30	164.	896
FE	II	2433.611	2432.873	60	321.	896	FE	II	2447.945	2447.204	40	300.	896
FE	II	2433.76J	2433.050	10	384.	488	FE	II	2448.068	2447.327	25	299.	896
FE	II	2434.233	2433.495	70	164.	488	FE	II	2448.300	2447.560	5	299.	488
FE	II	2434.238	2433.500	6	164.	896	FE	II	2448.497	2447.755	30	320.	896
FE	II	2434.309	2433.571	5	359.	488	FE	II	2449.471	2448.731	5	222.	488
FE	II	2434.797	2434.059	25	375.	896	FE	II	2449.925	2449.185	5	129.	488
FE	II	2434.975	2434.237	20	384.	896	FE	II	2450.012	2449.272	1	128.	488
FE	II	2435.136	2434.398	1	301.	488	FE	II	2450.480	2449.739	5	34.	488
FE	II	2435.387	2434.648	20	301.	896	FE	II	2450.707	2449.965	25	300.	896
FE	II	2435.468	2434.729	50	321.	896	FE	II	2450.774	2450.032	12		896
FE	II	2435.580	2434.822	50	375.	488	FE	II	2450.875	2450.134	50	375.	488
FE	II	2435.690	2434.951	50	180.	896	FE	II	2450.947	2450.205	25	300.	896
FE	II	2435.741	2435.002	25	383.	896	FE	II	2451.022	2450.280	5		1026
FE	II	2436.555	2435.816	5	164.	488	FE	II	2451.847	2451.106	20	34.	488
FE	II	2436.958	2436.219	4	209.	896	FE	II	2451.949	2451.208	40	209.	488
FE	II	2437.152	2436.413	1	360.	488	FE	II	2452.095	2451.354	5	300.	488
FE	II	2437.361	2436.622	25	384.	896	FE	II	2452.095	2451.354	5	114.	488
FE	II	2437.735	2436.995	10	375.	896	FE	II	2452.949	2452.206	5		1026
FE	II	2437.837	2437.100	50	375.	488	FE	II	2453.658	2452.916	5	300.	488
FE	II	2437.894	2437.157	40	210.	488	FE	II	2453.896	2453.153	12	386.	896
FE	II	2437.993	2437.256	40	313.	488	FE	II	2454.489	2453.747	150	375.	488
FE	II	2437.996	2437.256	3		645	FE	II	2454.540	2453.797	10	163.	896
FE	II	2438.369	2437.632	200	375.	488	FE	II	2454.677	2453.935	250	375.	488
FE	II	2440.0411	2439.3015	125	209.	896	FE	II	2454.719	2453.976	20	401.	896
FE	II	2440.598	2439.860	80	375.	488	FE	II	2454.900	2454.158	20	222.	488
FE	II	2441.163	2440.423	40	300.	896	FE	II	2455.321	2454.578	30	320.	896
FE	II	2441.868	2441.128	10	395.	896	FE	II	2456.452	2455.708	15	395.	896
FE	II	2442.286	2441.548	5	210.	488	FE	II	2456.463	2455.721	20	395.	488
FE	II	2443.115	2442.374	30		896	FE	II	2456.641	2455.898	15	384.	896

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2457.384	2456.641	20	320.	488		FE	II	2471.511	2470.764	10	223.	896	H
FE	II	2457.559	2456.816	20	209.	488	H	FE	II	2472.021	2471.276	5	394.	488	
FE	II	2457.839	2457.095	15	269.	896		FE	II	2472.419	2471.674	1	162.	488	
FE	II	2458.528	2457.785	1	299.	488		FE	II	2472.819	2472.072	6	162.	896	H
FE	II	2459.270	2458.527	10		292		FE	II	2473.175	2472.428	40	179.	896	H
FE	II	2459.528	2458.784	125	209.	896	H	FE	II	2473.352	2472.605	40	395.	896	
FE	II	2459.717	2458.973	40	299.	896	H	FE	II	2473.782	2473.037	5	400.	488	
FE	II	2459.840	2459.097	20	163.	488	H	FE	II	2474.069	2473.321	50	148.	896	H
FE	II	2459.840	2459.097	20	312.	488		FE	II	2474.801	2474.054	30		896	
FE	II	2460.039	2459.296	0	382.	488		FE	II	2475.514	2474.766	10	208.	896	H
FE	II	2460.898	2460.154	6	401.	896		FE	II	2475.865	2475.117	50	395.	896	
FE	II	2461.185	2460.440	60	395.	896		FE	II	2476.289	2475.541	40	395.	896	
FE	II	2461.388	2460.644	20	359.	488		FE	II	2477.011	2476.262	15	163.	896	H
FE	II	2462.028	2461.283	80	209.	896	H	FE	II	2477.183	2476.437	0	386.	488	
FE	II	2462.413	2461.668	10	163.	896	H	FE	II	2477.864	2477.117	0	311.	488	
FE	II	2462.605	2461.860	100	209.	896	H	FE	II	2478.091	2477.342	25	162.	896	H
FE	II	2463.069	2462.325	5	395.	488		FE	II	2478.247	2477.498	10	113.	896	
FE	II	2464.037	2463.292	50	208.	896	H	FE	II	2478.861	2478.112	10	224.	896	H
FE	II	2464.471	2463.726	20	162.	488		FE	II	2478.953	2478.206	20	149.	488	H
FE	II	2464.471	2463.726	20	129.	488		FE	II	2479.196	2478.449	20	161.	488	H
FE	II	2464.645	2463.900	50	385.	488		FE	II	2479.320	2478.571	60	179.	896	H
FE	II	2464.754	2464.009	40	208.	896	H	FE	II	2479.972	2479.225	5	358.	488	
FE	II	2465.314	2464.569	1		1026		FE	II	2480.008	2479.259	10		896	
FE	II	2465.650	2464.904	40	208.	896	H	FE	II	2480.023	2479.276	1	208.	488	
FE	II	2465.945	2465.199	10	148.	896	H	FE	II	2480.132	2479.385	30	382.	488	
FE	II	2466.658	2465.912	50	208.	896	H	FE	II	2480.862	2480.115	285	179.	488	H
FE	II	2467.242	2466.496	15		896		FE	II	2480.906	2480.157	100		896	
FE	II	2467.417	2466.671	60	179.	896	H	FE	II	2481.797	2481.048	15	243.	896	H
FE	II	2467.564	2466.819	60	179.	896	H	FE	II	2482.324	2481.576	20	112.	488	
FE	II	2468.478	2467.732	60	387.	488		FE	II	2482.866	2482.117	80	161.	896	H
FE	II	2468.940	2468.194	5	332.	488		FE	II	2483.075	2482.325	25	358.	896	
FE	II	2469.038	2468.292	70	163.	488	H	FE	II	2483.408	2482.657	100	207.	896	H
FE	II	2469.042	2468.295	15	145.	896	H	FE	II	2483.615	2482.866	15	400.	896	
FE	II	2469.307	2468.561	5	113.	488		FE	II	2484.471	2483.721	15	331.	896	H
FE	II	2470.117	2469.373	5	162.	488	H	FE	II	2484.991	2484.241	60	243.	896	H
FE	II	2470.260	2469.514	60	299.	896	H	FE	II	2485.191	2484.441	30	400.	896	
FE	II	2470.456	2469.712	80	382.	488		FE	II	2485.302	2484.553	5	243.	488	
FE	II	2470.567	2469.823	20	358.	488		FE	II	2485.325	2484.576	20	331.	488	
FE	II	2471.154	2470.408	25	208.	896	H	FE	II	2485.825	2485.076	1	34.	488	H
FE	II	2471.417	2470.670	80	179.	896	H	FE	II	2486.244	2485.495	0	382.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2487.092	2486.343	220	208.	488	H	FE	II	2508.443	2507.688	15	363.	896	
FE	II	2488.106	2487.356	50	385.	488		FE	II	2509.0966	2508.3411	30		896	H N
FE	II	2489.085	2488.335	20		488	N	FE	II	2509.879	2509.123	15	242.	896	H
FE	II	2489.825	2489.074	10		896		FE	II	2510.621	2509.866	12	363.	896	
FE	II	2490.234	2489.482	80	161.	896	H	FE	II	2510.875	2510.121	5	400.	488	
FE	II	2490.580	2489.829	50	207.	896	H	FE	II	2511.319	2510.565	5	112.	488	
FE	II	2491.457	2490.706	100	331.	896		FE	II	2512.138	2511.382	12	33.	896	H
FE	II	2491.610	2490.858	60	179.	896	H	FE	II	2512.5169	2511.7606	110	161.	896	H
FE	II	2492.148	2491.396	100	207.	896	H	FE	II	2512.665	2511.910	20	175.	488	
FE	II	2493.095	2492.344	25	243.	896	H	FE	II	2513.278	2512.521	15	343.	896	H
FE	II	2493.936	2493.184	100	161.	896	H	FE	II	2513.482	2512.727	0	129.	488	
FE	II	2493.936	2493.184	100	207.	896	H	FE	II	2513.910	2513.155	20	363.	488	
FE	II	2494.014	2493.262	220	161.	896	H	FE	II	2514.127	2513.372	5	207.	488	
FE	II	2494.628	2493.876	20	400.	896		FE	II	2515.1400	2514.3831	50	285.	896	H
FE	II	2494.863	2494.111	20	161.	488	H	FE	II	2515.667	2514.912	40	175.	488	H
FE	II	2495.645	2494.893	20	382.	488		FE	II	2515.876	2515.119	12		896	
FE	II	2495.985	2495.233	1	393.	488		FE	II	2516.681	2515.925	1	363.	488	
FE	II	2498.053	2497.300	5	208.	488	H	FE	II	2517.889	2517.131	50	147.	896	H
FE	II	2498.467	2497.714	5	128.	896	H	FE	II	2517.967	2517.211	20	207.	488	H
FE	II	2498.467	2497.714	5	242.	896	H	FE	II	2519.8052	2519.0460	60	268.	896	H
FE	II	2498.572	2497.819	50	207.	896	H	FE	II	2520.161	2519.404	20	222.	488	
FE	II	2498.572	2497.819	50	175.	896	H	FE	II	2521.020	2520.262	8	363.	896	
FE	II	2498.835	2498.082	8		896		FE	II	2521.292	2520.535	1	343.	488	
FE	II	2499.096	2498.343	5		896		FE	II	2521.426	2520.669	20	242.	488	H
FE	II	2499.650	2498.897	450	161.	488	H	FE	II	2521.506	2520.749	1	175.	488	
FE	II	2501.678	2500.924	40	357.	896	H	FE	II	2521.8505	2521.0920	40	268.	896	H
FE	II	2502.066	2501.312	40		896		FE	II	2521.977	2521.218	8		896	
FE	II	2502.105	2501.351	1	400.	488		FE	II	2522.242	2521.485	20		488	N
FE	II	2503.1471	2502.3930	60	207.	896	H	FE	II	2522.5742	2521.8155	30	330.	896	H
FE	II	2504.0809	2503.3265	40	206.	896	H	FE	II	2522.956	2522.197	15	159.	896	H
FE	II	2504.312	2503.560	110	161.	488	H	FE	II	2524.200	2523.441	15	363.	896	
FE	II	2504.320	2503.566	20	175.	896	H	FE	II	2525.868	2525.109	15	330.	896	
FE	II	2504.6287	2503.8742	60	285.	896	H	FE	II	2526.1476	2525.3881	140	159.	896	H
FE	II	2505.640	2504.885	0		645		FE	II	2526.622	2525.862	12	241.	896	
FE	II	2505.970	2505.217	20	33.	488	H	FE	II	2526.679	2525.919	8	363.	896	
FE	II	2506.8484	2506.0934	80	207.	896	H	FE	II	2526.835	2526.075	25	159.	896	H
FE	II	2507.189	2506.434	12	128.	896	H	FE	II	2527.0538	2526.2941	170	145.	896	H
FE	II	2507.5515	2506.7963	40	175.	896		FE	II	2527.596	2526.836	8	33.	896	
FE	II	2507.781	2507.026	8	207.	896		FE	II	2527.865	2527.105	20	159.	896	H
FE	II	2508.360	2507.607	20	363.	488		FE	II	2528.465	2527.705	30	329.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	II	2529.436	2528.676	0	176.	486		FE	II	2545.737	2544.972	40	147.	896	H
FE	II	2529.638	2528.877	20		896		FE	II	2545.985	2545.220	40	159.	896	H
FE	II	2529.838	2529.077	20	357.	896		FE	II	2546.208	2545.444	20	267.	896	
FE	II	2529.989	2529.229	25	241.	896	H	FE	II	2546.275	2545.513	5	178.	488	
FE	II	2530.310	2529.549	155	177.	896	H	FE	II	2547.206	2546.442	40		896	
FE	II	2530.689	2529.929	5	329.	488		FE	II	2547.434	2546.670	80	177.	896	H
FE	II	2530.869	2530.108	40	178.	896	H	FE	II	2548.102	2547.338	15	158.	896	H
FE	II	2530.869	2530.108	40	363.	896	H	FE	II	2548.503	2547.740	0	176.	488	
FE	II	2531.842	2531.082	5	33.	488	H	FE	II	2548.929	2548.166	1	176.	488	
FE	II	2532.632	2531.871	20		896		FE	II	2549.090	2548.325	15	146.	896	H
FE	II	2532.854	2532.093	0	392.	488		FE	II	2549.353	2548.589	20	158.	896	H
FE	II	2534.388	2533.627	110		896	H	FE	II	2549.508	2548.743	100	145.	896	H
FE	II	2535.113	2534.416	100	159.	896	H	FE	II	2549.688	2548.922	15		896	
FE	II	2536.124	2535.362	10	405.	896		FE	II	2549.848	2549.083	80	284.	896	
FE	II	2536.248	2535.486	110	177.	896	H	FE	II	2550.160	2549.395	80	177.	896	H
FE	II	2537.435	2536.673	60	241.	896	H	FE	II	2550.226	2549.461	60	177.	896	H
FE	II	2537.565	2536.803	140	159.	896	H	FE	II	2550.532	2549.767	40	266.	896	
FE	II	2537.608	2536.845	50	159.	896		FE	II	2550.793	2550.027	60	240.	896	H
FE	II	2537.900	2537.138	50	363.	896		FE	II	2550.914	2550.149	25	363.	896	
FE	II	2538.967	2538.204	50	319.	896	H	FE	II	2551.339	2550.575	20	158.	488	H
FE	II	2539.153	2538.393	5	178.	488	H	FE	II	2551.448	2550.683	50	240.	896	H
FE	II	2539.264	2538.501	40	160.	896	H	FE	II	2551.970	2551.205	12	328.	896	
FE	II	2539.337	2538.577	20	268.	488		FE	II	2554.503	2553.738	20	127.	488	H
FE	II	2539.443	2538.680	20	363.	896		FE	II	2555.200	2554.435	1	298.	488	
FE	II	2539.562	2538.799	100	158.	896	H	FE	II	2555.715	2554.950	5	205.	488	
FE	II	2539.672	2538.909	100	158.	896	H	FE	II	2555.834	2555.067	15	177.	896	H
FE	II	2539.756	2538.993	125	158.	896	H	FE	II	2556.219	2555.453	15	177.	896	H
FE	II	2540.558	2539.797	20	176.	488		FE	II	2557.845	2557.079	20	158.	488	
FE	II	2540.814	2540.053	1	267.	488		FE	II	2558.272	2557.505	10	175.	896	H
FE	II	2541.280	2540.523	20	349.	896		FE	II	2559.896	2559.129	M		645	
FE	II	2541.425	2540.66	140	177.	896	H	FE	II	2560.003	2559.237	10	266.	488	
FE	II	2541.430	2540.669	160	343.	488	H	FE	II	2560.038	2559.270	15		896	
FE	II	2541.865	2541.101	80	177.	896	H	FE	II	2560.541	2559.774	110	205.	488	H
FE	II	2542.600	2541.836	60	158.	896	H	FE	II	2560.692	2559.924	12	267.	896	
FE	II	2543.077	2542.316	5	33.	488		FE	II	2561.049	2560.281	40	221.	896	H
FE	II	2543.500	2542.736	20	223.	896	H	FE	II	2561.210	2560.443	0	158.	488	H
FE	II	2543.548	2542.785	25		896		FE	II	2562.351	2561.584	5	205.	488	
FE	II	2543.843	2543.079	15		896		FE	II	2562.860	2562.092	25	221.	896	H
FE	II	2544.141	2543.377	60	159.	896	H	FE	II	2563.304	2562.535	200	64.	896	H
FE	II	2544.194	2543.430	60	177.	896	H	FE	II	2564.245	2563.477	140	64.	896	H

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2564.602	2563.834	70	266.	488		FE	II	2593.555	2592.781	360	318.	488	H
FE	II	2566.074	2565.306	1	419.	488		FE	II	2594.496	2593.722	220	64.	488	H
FE	II	2566.989	2566.220	20	404.	896		FE	II	2595.739	2594.964	20	310.	488	
FE	II	2567.171	2566.401	10	405.	896		FE	II	2596.060	2595.285	20	172.	488	H
FE	II	2567.392	2566.623	70	174.	488		FE	II	2598.718	2597.943	20	342.	488	
FE	II	2567.682	2566.912	60	64.	896	H	FE	II	2598.804	2598.028	20	239.	488	
FE	II	2568.095	2567.326	1	419.	408		FE	II	2599.145	2598.369	870	1.	488	H
FE	II	2568.401	2567.631	10	896			FE	II	2600.171	2599.395	870	1.	488	H
FE	II	2569.178	2568.409	12	145.	896	H	FE	II	2601.191	2600.415	5	204.	488	
FE	II	2569.648	2568.879	40	175.	488		FE	II	2604.825	2604.048	5	404.	488	
FE	II	2570.545	2569.775	70	266.	488		FE	II	2605.432	2604.655	5	265.	488	
FE	II	2570.549	2569.779	8	349.	896	H	FE	II	2605.815	2605.037	15	404.	896	
FE	II	2571.296	2570.525	25	412.	896		FE	II	2606.117	2605.339	20	342.	896	
FE	II	2571.618	2570.848	30	284.	896	H	FE	II	2606.202	2605.424	20	204.	896	
FE	II	2572.312	2571.542	20	174.	488	H	FE	II	2606.680	2605.902	8	356.	896	
FE	II	2573.738	2572.967	12	190.	896		FE	II	2607.291	2606.512	170	342.	896	H
FE	II	2573.981	2573.211	10	205.	896	H	FE	II	2607.864	2607.086	750	1.	488	H
FE	II	2574.525	2573.754	5	284.	488		FE	II	2608.307	2607.529	10	896		
FE	II	2575.133	2574.362	125	144.	896	H	FE	II	2608.407	2607.628	6	896		
FE	II	2577.633	2576.861	25	326.	896	H	FE	II	2609.631	2608.852	4	171.	896	H
FE	II	2578.200	2577.431	5	175.	488		FE	II	2609.904	2609.125	12	310.	896	H
FE	II	2578.691	2577.919	60	64.	896	H	FE	II	2610.219	2609.440	4	265.	896	
FE	II	2579.755	2578.985	5	265.	488		FE	II	2610.646	2609.866	10	204.	896	H
FE	II	2579.887	2579.115	15	896			FE	II	2611.853	2611.073	20	64.	896	H
FE	II	2580.176	2579.406	40	266.	488		FE	II	2612.118	2611.339	5	173.	488	
FE	II	2580.185	2579.413	8	239.	896	H	FE	II	2612.653	2611.873	240	1.	896	H
FE	II	2581.487	2580.717	1	327.	488	H	FE	II	2614.196	2613.416	12	896		
FE	II	2581.882	2581.110	8	190.	896		FE	II	2614.356	2613.576	20	172.	488	
FE	II	2583.186	2582.413	8	310.	896		FE	II	2614.600	2613.820	750	1.	488	H
FE	II	2583.353	2582.580	100	64.	896	H	FE	II	2614.957	2614.177	20	264.	488	
FE	II	2583.818	2583.047	20	174.	488		FE	II	2615.022	2614.242	1	645		
FE	II	2584.114	2583.343	1	266.	488		FE	II	2615.648	2614.867	20	171.	488	
FE	II	2586.401	2585.629	110	326.	488		FE	II	2616.510	2615.729	1	297.	488	
FE	II	2586.53	2585.76	239.	488			FE	II	2618.397	2617.618	650	1.	488	H
FE	II	2586.648	2585.876	750	1.	488	H	FE	II	2619.855	2619.074	20	171.	896	H
FE	II	2588.718	2587.945	220	326.	488	H	FE	II	2620.953	2620.172	10	173.	896	
FE	II	2588.955	2588.182	40	145.	488		FE	II	2621.190	2620.408	12	1.	896	H
FE	II	2589.559	2588.786	40	265.	488		FE	II	2621.477	2620.695	20	171.	896	H
FE	II	2591.321	2590.548	70	145.	488	H	FE	II	2622.451	2621.669	40	1.	896	H
FE	II	2592.316	2591.542	450	64.	488	H	FE	II	2623.890	2623.107	4	318.	896	H

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2624.508	2623.726	15	171.	896	H	FE	II	2652.615	2651.826	1	427.	488	
FE	II	2625.983	2625.202	1	410.	488		FE	II	2653.356	2652.566	2	237.	896	
FE	II	2626.273	2625.490	50	318.	896	H	FE	II	2654.347	2653.557	2	432.	896	
FE	II	2626.450	2625.667	140	1.	896	H	FE	II	2654.457	2653.667	2	432.	896	
FE	II	2627.284	2626.501	15	173.	896	H	FE	II	2655.419	2654.629	5	410.	896	
FE	II	2627.477	2626.695	5	203.	488		FE	II	2656.186	2655.396	0	374.	488	
FE	II	2629.076	2628.293	125	1.	896	H	FE	II	2656.483	2655.692	8		896	
FE	II	2629.351	2628.569	20	203.	488		FE	II	2657.961	2657.171	3	432.	896	
FE	II	2630.372	2629.590	285	171.	488	H	FE	II	2658.378	2657.588	6		896	
FE	II	2630.855	2630.071	20	171.	896	H	FE	II	2658.712	2657.921	3	283.	896	
FE	II	2631.831	2631.047	155	171.	896	H	FE	II	2659.043	2658.252	10	309.	896	
FE	II	2631.831	2631.047	155	1.	896	H	FE	II	2659.843	2659.054	1	237.	488	
FE	II	2632.106	2631.322	155	1.	896	H	FE	II	2661.027	2660.236	5	429.	896	
FE	II	2632.393	2631.608	50	171.	896		FE	II	2662.563	2661.771	6	429.	896	
FE	II	2633.989	2633.203	8	356.	896	H	FE	II	2663.350	2662.558	5	410.	896	
FE	II	2635.911	2635.127	0	296.	488		FE	II	2664.050	2663.260	3	432.	896	
FE	II	2636.089	2635.304	3		896		FE	II	2664.737	2663.945	5	428.	896	
FE	II	2636.188	2635.402	5	238.	896		FE	II	2664.999	2664.209	20	237.	488	
FE	II	2636.188	2635.402	5	296.	896		FE	II	2665.052	2664.260	6	427.	896	
FE	II	2637.472	2636.687	5	356.	488		FE	II	2665.456	2664.663	60	263.	896	H
FE	II	2638.284	2637.497	5	410.	896		FE	II	2666.128	2665.337	1	432.	488	
FE	II	2638.430	2637.644	15	221.	896	H	FE	II	2666.333	2665.541	15	428.	896	
FE	II	2640.351	2639.564	12	221.	896	H	FE	II	2667.429	2666.636	30	263.	896	H
FE	II	2641.910	2641.123	5	144.	896		FE	II	2668.010	2667.220	10	410.	896	
FE	II	2642.800	2642.013	8	309.	896	H	FE	II	2668.426	2667.635	0	430.	488	
FE	II	2643.768	2642.982	1	426.	488		FE	II	2669.730	2668.938	5	429.	488	
FE	II	2644.434	2643.647	3		896		FE	II	2669.801	2669.008	12	429.	896	
FE	II	2645.871	2645.083	5	309.	896		FE	II	2670.726	2669.933	2	416.	896	
FE	II	2645.871	2645.084	40	263.	488		FE	II	2671.176	2670.384	20	355.	488	
FE	II	2645.978	2645.191	20	421.	488		FE	II	2672.196	2671.404	20	410.	488	
FE	II	2646.122	2645.334	3	426.	896		FE	II	2672.716	2671.922	10	432.	896	
FE	II	2646.698	2645.911	1	410.	488		FE	II	2672.933	2672.139	10	429.	896	
FE	II	2646.993	2646.206	5	237.	488		FE	II	2673.103	2672.310	1	202.	488	
FE	II	2647.480	2646.692	1	220.	488		FE	II	2673.342	2672.548	6	429.	896	
FE	II	2648.947	2648.159	0	355.	488		FE	II	2676.235	2675.440	1		896	
FE	II	2649.492	2648.704	1	409.	488		FE	II	2677.678	2676.883	6		896	
FE	II	2650.258	2649.469	6	427.	896		FE	II	2679.066	2678.270	1		896	
FE	II	2651.270	2650.481	2	410.	896		FE	II	2680.571	2679.775	5	429.	896	
FE	II	2652.059	2651.270	3	237.	896		FE	II	2680.957	2680.160	8		896	
FE	II	2652.50	2651.71	25	355.	896		FE	II	2681.029	2680.233	3	408.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2681.499	2680.702	15	429.	896		FE	II	2710.174	2709.373	5	62.	488	
FE	II	2681.615	2680.818	15	202.	896		FE	II	2710.738	2709.937	1	340.	488	
FE	II	2681.839	2681.042	2	429.	896		FE	II	2710.840	2710.037	8		896	
FE	II	2681.839	2681.042	2	416.	896		FE	II	2712.646	2711.842	10	201.	896	H
FE	II	2683.308	2682.511	6	425.	896		FE	II	2713.100	2712.296	15	431.	896	
FE	II	2683.795	2682.998	6	416.	896		FE	II	2713.195	2712.391	10	201.	896	
FE	II	2684.573	2683.776	4		896		FE	II	2713.791	2712.989	5	325.	488	
FE	II	2685.150	2684.354	0	429.	488		FE	II	2715.218	2714.413	80	63.	896	H
FE	II	2685.551	2684.754	220	283.	896	H	FE	II	2716.412	2715.609	1	325.	488	
FE	II	2685.760	2684.963	1	201.	896		FE	II	2716.490	2715.685	6		896	
FE	II	2686.233	2685.436	6	381.	896		FE	II	2717.022	2716.217	50	261.	896	H
FE	II	2686.905	2686.107	1	202.	896		FE	II	2717.232	2716.429	40	339.	488	
FE	II	2687.015	2686.218	15		896		FE	II	2717.369	2716.564	15	434.	896	
FE	II	2687.185	2686.388	5	262.	488		FE	II	2717.506	2716.701	3	62.	896	
FE	II	2687.234	2686.436	1		896		FE	II	2718.336	2717.533	5	417.	488	H
FE	II	2687.278	2686.482	0		645		FE	II	2718.356	2717.553	1	32.	488	
FE	II	2687.750	2686.952	1		896		FE	II	2718.679	2717.873	50	431.	896	
FE	II	2688.990	2688.191	3		896		FE	II	2719.446	2718.640	8	417.	896	
FE	II	2692.536	2691.737	6	202.	896		FE	II	2720.107	2719.301	12	339.	896	
FE	II	2693.402	2692.602	60	283.	896	H	FE	II	2722.618	2721.813	70	199.	488	
FE	II	2693.633	2692.834	6	62.	896		FE	II	2722.869	2722.062	10	260.	896	
FE	II	2694.656	2693.857	2	261.	896		FE	II	2723.547	2722.740	5	416.	896	
FE	II	2695.068	2694.269	20	374.	488		FE	II	2724.243	2723.438	1	431.	488	
FE	II	2697.392	2696.592	8		896		FE	II	2725.691	2724.884	30		896	H
FE	II	2698.132	2697.331	6	341.	896	H	FE	II	2727.060	2726.254	40	434.	488	
FE	II	2698.261	2697.461	12	341.	896	H	FE	II	2727.315	2726.509	40	261.	488	H
FE	II	2698.521	2697.721	6	325.	896		FE	II	2727.615	2726.809	1	645		
FE	II	2698.598	2697.797	10	431.	896		FE	II	2728.191	2727.383	25	200.	896	H
FE	II	2700.000	2699.199	3	416.	896		FE	II	2728.346	2727.538	80	63.	896	H
FE	II	2700.423	2699.622	6		896		FE	II	2729.374	2728.567	20		488	N
FE	II	2701.157	2700.356	10		896		FE	II	2729.713	2728.905	80	260.	896	
FE	II	2701.974	2701.174	1		645		FE	II	2730.137	2729.329	5		896	
FE	II	2702.343	2701.541	8		896		FE	II	2730.234	2729.427	5	220.	488	
FE	II	2704.790	2703.988	60	261.	896	H	FE	II	2730.376	2729.569	5	417.	488	
FE	II	2705.369	2704.569	5	202.	488		FE	II	2731.542	2730.734	40	62.	896	H
FE	II	2707.366	2706.566	220	341.	488		FE	II	2732.052	2731.243	8	431.	896	
FE	II	2707.716	2706.913	6		896		FE	II	2732.649	2731.841	20		488	N
FE	II	2707.928	2707.128	160	339.	488		FE	II	2732.817	2732.008	5	236.	896	
FE	II	2709.220	2708.417	5		896		FE	II	2733.136	2732.328	20		488	N
FE	II	2709.858	2709.054	20	218.	896	H	FE	II	2733.249	2732.441	20	32.	488	H

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2733.744	2732.936	40	417.	488		FE	II	2762.449	2761.635	20		488	N
FE	II	2735.463	2734.655	20	381.	488		FE	II	2762.628	2761.812	125	63.	896	H
FE	II	2735.612	2734.803	20	416.	488		FE	II	2763.154	2762.340	70	373.	488	
FE	II	2737.309	2736.500	5	220.	488		FE	II	2763.250	2762.436	70	199.	488	
FE	II	2737.777	2736.968	650	63.	488	H	FE	II	2763.380	2762.566	1	219.	488	
FE	II	2738.439	2737.630	70	200.	488		FE	II	2764.472	2763.656	20	440.	896	
FE	II	2740.357	2739.546	200	63.	896	H	FE	II	2764.654	2763.839	1		645	
FE	II	2741.855	2741.045	20	418.	488		FE	II	2764.727	2763.913	40	199.	488	
FE	II	2742.135	2741.325	1	417.	488		FE	II	2764.794	2763.979	20	407.	488	
FE	II	2742.205	2741.395	160	260.	488	H	FE	II	2765.280	2764.465	1	424.	488	
FE	II	2742.483	2741.673	M		645		FE	II	2765.602	2764.787	40	198.	488	
FE	II	2744.008	2743.196	140	62.	896	H	FE	II	2765.945	2765.128	25		896	
FE	II	2745.501	2744.691	0		645		FE	II	2766.04J	2765.224	8		896	
FE	II	2745.701	2744.890	40	260.	488		FE	II	2766.308	2765.493	5	324.	488	
FE	II	2746.969	2746.157	70	373.	488		FE	II	2767.015	2766.200	5	324.	488	
FE	II	2747.295	2746.483	170	62.	896	H	FE	II	2768.316	2767.500	750	235.	488	
FE	II	2747.790	2746.978	870	63.	488	H	FE	II	2768.316	2767.500	750	373.	488	H
FE	II	2749.991	2749.178	750	63.	488	H	FE	II	2769.150	2768.334	5	338.	488	
FE	II	2750.133	2749.320	100	62.	896	H	FE	II	2769.664	2768.848	1	324.	488	
FE	II	2750.298	2749.485	220	63.	896	H	FE	II	2769.752	2768.934	12	63.	896	H
FE	II	2750.816	2750.003	20	199.	488		FE	II	2769.970	2769.153	8	200.	896	H
FE	II	2751.709	2750.896	40	200.	488		FE	II	2770.173	2769.355	25	198.	896	H
FE	II	2751.938	2751.125	20	217.	896	H	FE	II	2770.382	2769.566	5	199.	488	
FE	II	2752.367	2751.555	1		645		FE	II	2770.652	2769.835	10		896	
FE	II	2752.903	2752.092	40	418.	488		FE	II	2771.119	2770.303	5	337.	488	
FE	II	2752.964	2752.150	20	373.	896		FE	II	2771.248	2770.432	20		488	N
FE	II	2753.845	2753.034	20	417.	488		FE	II	2771.323	2770.505	4	198.	896	
FE	II	2754.101	2753.287	80	235.	896	H	FE	II	2771.323	2770.505	4	199.	896	
FE	II	2754.967	2754.155	20		488	N	FE	II	2772.001	2771.184	110	282.	488	
FE	II	2755.703	2754.888	30	373.	896		FE	II	2772.370	2771.553	40	197.	488	
FE	II	2755.900	2755.088	1	373.	488		FE	II	2773.536	2772.719	5	63.	488	
FE	II	2756.549	2755.734	280	62.	896	H	FE	II	2774.478	2773.659	8	338.	896	
FE	II	2757.324	2756.509	6	200.	896		FE	II	2775.505	2774.686	20	218.	896	H
FE	II	2757.845	2757.030	8	199.	896	H	FE	II	2776.157	2775.339	5	32.	488	
FE	II	2758.651	2757.836	5		896		FE	II	2776.998	2776.180	70	199.	488	
FE	II	2760.149	2759.336	20	32.	488	H	FE	II	2777.727	2776.907	15	373.	896	
FE	II	2761.319	2760.505	M		645		FE	II	2778.659	2777.840	5	281.	488	
FE	II	2761.571	2760.757	0	433.	488		FE	II	2778.709	2777.889	5	233.	896	
FE	II	2761.942	2761.128	20		488	N	FE	II	2780.119	2779.299	40	234.	896	H
FE	II	2761.998	2761.183	8		896		FE	II	2780.728	2779.907	5	348.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2780.854	2780.035	40	348.	488		FE	II	2814.439	2813.613	110	198.	488	
FE	II	2780.997	2780.178	0	259.	488		FE	II	2817.917	2817.088	6	380.	896	
FE	II	2784.230	2783.410	5	337.	488		FE	II	2820.155	2819.327	40	196.	488	
FE	II	2784.512	2783.691	50	234.	896	H	FE	II	2821.521	2820.690	3		896	
FE	II	2784.779	2783.959	20	295.	488		FE	II	2822.889	2822.058	3		896	
FE	II	2785.102	2784.282	20	295.	488		FE	II	2823.497	2822.668	5	231.	488	
FE	II	2785.305	2784.484	5	373.	488		FE	II	2825.231	2824.401	0	423.	488	
FE	II	2786.015	2785.193	30	373.	896		FE	II	2825.419	2824.589	5	399.	488	
FE	II	2786.621	2785.800	0	295.	488		FE	II	2826.577	2825.747	40	195.	488	
FE	II	2788.064	2787.241	5	380.	896		FE	II	2826.854	2826.024	70	255.	488	
FE	II	2790.500	2789.678	5		896		FE	II	2828.262	2827.431	110	231.	488	
FE	II	2790.887	2790.065	5	436.	488		FE	II	2829.459	2828.627	6	231.	896	H
FE	II	2790.999	2790.177	1	411.	488		FE	II	2829.510	2828.678	5	255.	896	
FE	II	2791.379	2790.557	40	282.	488		FE	II	2830.892	2830.061	1	259.	488	
FE	II	2791.574	2790.752	1	32.	488	H	FE	II	2831.793	2830.960	6	280.	896	
FE	II	2791.823	2791.001	20	232.	488		FE	II	2832.088	2831.255	6		896	
FE	II	2792.873	2792.050	5	233.	488		FE	II	2832.394	2831.561	25	217.	896	H
FE	II	2794.062	2793.239	20	337.	488		FE	II	2832.715	2831.883	5	399.	488	
FE	II	2794.712	2793.888	20	198.	896	H	FE	II	2833.102	2832.270	1	347.	488	
FE	II	2796.584	2795.760	5	281.	488		FE	II	2833.918	2833.085	10	380.	896	
FE	II	2797.452	2796.627	10	373.	896		FE	II	2836.545	2835.711	12	216.	896	
FE	II	2797.861	2797.037	1	32.	488		FE	II	2837.018	2836.185	70	294.	488	
FE	II	2798.019	2797.195	10	436.	896		FE	II	2837.342	2836.509	70	294.	488	
FE	II	2798.739	2797.914	110	234.	488	H	FE	II	2838.133	2837.300	110	231.	488	
FE	II	2800.119	2799.294	30	233.	896	H	FE	II	2839.050	2838.215	6	380.	896	
FE	II	2800.537	2799.712	20	198.	488		FE	II	2840.348	2839.513	30	391.	896	
FE	II	2801.362	2800.537	6	436.	896		FE	II	2840.634	2839.799	20	380.	896	
FE	II	2804.256	2803.430	8	438.	896		FE	II	2841.179	2840.344	6	195.	896	
FE	II	2804.762	2803.936	5		896		FE	II	2841.484	2840.649	15	217.	896	H
FE	II	2804.845	2804.021	40	259.	488		FE	II	2841.594	2840.758	12	280.	896	
FE	II	2805.826	2804.999	5		896		FE	II	2842.189	2841.354	20	196.	488	
FE	II	2806.139	2805.315	40	295.	488		FE	II	2842.911	2842.076	40	196.	488	
FE	II	2806.610	2805.786	70	259.	488		FE	II	2843.512	2842.677	5	279.	488	
FE	II	2806.831	2806.007	20	438.	488		FE	II	2844.158	2843.323	70	231.	488	
FE	II	2808.006	2807.179	3	281.	896		FE	II	2844.320	2843.485	110	294.	488	
FE	II	2809.225	2808.398	5		896		FE	II	2845.793	2844.957	5	399.	896	
FE	II	2810.611	2809.783	10	380.	896		FE	II	2846.228	2845.392	70	294.	488	
FE	II	2812.095	2811.269	40	196.	488		FE	II	2846.261	2845.425	8	399.	896	
FE	II	2813.319	2812.493	40	215.	488		FE	II	2846.286	2845.450	70	399.	488	
FE	II	2813.493	2812.667	1	280.	488		FE	II	2846.325	2845.488	3		896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	2848.044	2847.208	70	197.	488		FE	II	2876.192	2875.348	8	258.	896	H
FE	II	2848.610	2847.773	8	380.	896		FE	II	2877.648	2876.804	4	257.	896	
FE	II	2848.889	2848.052	8	196.	896	H	FE	II	2880.084	2879.241	70	278.	488	
FE	II	2848.943	2848.106	15	399.	896		FE	II	2880.386	2879.543	20	230.	488	
FE	II	2849.157	2848.320	15	391.	896		FE	II	2880.692	2879.849	1	293.	488	
FE	II	2849.736	2848.899	110	317.	488		FE	II	2880.979	2880.136	1	308.	488	
FE	II	2850.443	2849.605	4	196.	896		FE	II	2881.602	2880.757	5	61.	896	H
FE	II	2851.478	2850.641	1	255.	488		FE	II	2881.676	2880.831	4	258.	896	
FE	II	2852.268	2851.430	5	195.	488		FE	II	2882.645	2881.801	1	293.	488	
FE	II	2852.560	2851.722	12	391.	896		FE	II	2883.351	2882.506	6	442.	896	
FE	II	2853.702	2852.864	20	219.	488		FE	II	2884.556	2883.711	8	230.	896	
FE	II	2853.957	2853.119	5	294.	488		FE	II	2885.115	2884.269	5	442.	896	
FE	II	2854.057	2853.199	20	197.	488		FE	II	2885.611	2884.765	5	399.	896	
FE	II	2856.528	2855.689	8	196.	896	H	FE	II	2886.779	2885.933	2	317.	896	
FE	II	2856.986	2856.147	4	195.	896		FE	II	2887.079	2886.234	40	229.	488	
FE	II	2857.216	2856.377	12	380.	896		FE	II	2888.157	2887.312	40	257.	488	
FE	II	2857.747	2856.908	30	399.	896		FE	II	2888.942	2888.095	4	215.	896	
FE	II	2858.014	2857.174	5	294.	896		FE	II	2889.582	2888.736	1	317.	488	
FE	II	2858.254	2857.415	70	195.	488		FE	II	2889.834	2888.988	5	229.	488	
FE	II	2859.177	2858.340	550	279.	488		FE	II	2893.062	2892.215	1	308.	488	
FE	I	2859.180	2858.340	25	195.	896	H	FE	II	2893.669	2892.822	40	61.	488	
FE	I	2859.356	2858.519	40	354.	488		FE	II	2894.905	2894.058	20	293.	488	
FE	I	2859.469	2858.629	5	399.	896		FE	II	2895.627	2894.779	3	230.	896	
FE	I	2862.025	2861.187	40	61.	488		FE	II	2895.919	2895.071	40	257.	488	
FE	I	2862.741	2861.903	5	280.	488		FE	II	2896.069	2895.220	4	294.	896	
FE	II	2864.973	2864.134	40	380.	488		FE	II	2896.179	2895.331	1	435.	488	
FE	II	2865.206	2864.367	20	195.	488		FE	II	2898.115	2897.266	5	254	896	
FE	II	2865.807	2864.968	70	294.	488		FE	II	2898.592	2897.744	20	323	488	
FE	II	2866.312	2865.473	20	391.	488		FE	II	2898.831	2897.983	5	435	488	
FE	II	2867.043	2866.201	5	896	896		FE	II	2899.587	2898.738	5	352	488	
FE	II	2868.886	2868.046	1	256.	488		FE	II	2900.133	2899.284	5	435.	488	
FE	II	2869.288	2868.446	70	353.	488		FE	II	2902.906	2902.056	5	293.	488	
FE	II	2869.714	2868.874	110	61.	488	H	FE	II	2903.167	2902.317	40	257.	488	
FE	II	2869.996	2869.156	70	257.	488		FE	II	2903.309	2902.459	110	278.	488	
FE	II	2870.534	2869.694	20	257.	488		FE	II	2905.424	2904.574	1	435.	488	
FE	II	2871.448	2870.608	40	195.	488		FE	II	2906.036	2905.185	5	255.	488	
FE	II	2871.900	2871.059	160	195.	488		FE	II	2906.595	2905.744	2	435.	896	
FE	II	2871.966	2871.125	160	230.	488		FE	II	2906.971	2906.120	70	215.	488	
FE	II	2873.223	2872.382	360	230.	488		FE	II	2908.704	2907.853	40	60.	488	
FE	II	2874.240	2873.399	450	279.	488	H	FE	II	2910.820	2909.968	5	256.	488	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	II	2911.576	20	435.	488		FE	II	2965.901	2965.035	8	78.	896
FE	II	2911.613	40	278.	488		FE	II	2966.260	2965.395	20	251.	488
FE	II	2912.676	5	441.	488		FE	II	2968.985	2968.119	1	398.	488
FE	II	2917.004	20	60.	488		FE	II	2969.604	2968.738	20	253.	488
FE	II	2917.784	20	229.	488		FE	II	2969.772	2968.906	20		488 N
FE	II	2917.938	70	336.	488		FE	II	2970.801	2969.934	285	277.	488
FE	II	2918.316	70	61.	488		FE	II	2971.384	2970.517	15	60.	896
FE	II	2918.728	1	645	488		FE	II	2971.549	2970.682	110	276.	488
FE	II	2919.383	3	435.	896		FE	II	2972.483	2971.616	5	252.	488
FE	II	2922.876	110	293.	488		FE	II	2972.883	2972.016	1	398.	488
FE	II	2925.013	5	351.	488		FE	II	2973.637	2972.769	5	390.	488
FE	II	2927.443	10	60.	896	H	FE	II	2976.806	2975.938	110	60.	488
FE	II	2929.385	0	645	488		FE	II	2978.253	2977.428	M	645	488
FE	II	2932.334	5	215.	488		FE	II	2979.719	2978.850	20	276.	488
FE	II	2932.449	70	488	488	N	FE	II	2979.965	2979.096	40	306.	488
FE	II	2934.322	1	307.	488		FE	II	2979.965	2979.096	40	403.	488
FE	II	2935.644	40	278.	488		FE	II	2980.225	2979.355	6		896
FE	II	2936.742	2	896	488		FE	II	2981.724	2980.857	1		645
FE	II	2936.927	6	323.	896		FE	II	2981.830	2980.963	70	253.	488
FE	II	2940.364	110	60	488		FE	II	2982.926	2982.059	285	335.	488
FE	II	2940.974	3	441.	896		FE	II	2983.106	2982.239	40	277.	488
FE	II	2941.324	0	645	488		FE	II	2985.141	2984.273	0	322.	488
FE	II	2945.257	12	78.	896	H	FE	II	2985.695	2984.824	50	78.	896
FE	II	2946.121	20	60.	488		FE	II	2986.413	2985.545	750	78.	488
FE	II	2947.033	1	307.	488		FE	II	2987.234	2986.366	1		645
FE	II	2948.519	750	78.	488	H	FE	II	2987.486	2986.617	70	254.	488
FE	II	2950.039	450	277.	488		FE	II	2987.78	2986.91	D	291.	488
FE	II	2951.956	20	214.	488		FE	II	2988.411	2987.542	5	437.	488
FE	II	2954.636	550	60.	488	H	FE	II	2989.948	2989.079	0	390.	488
FE	II	2954.912	70	253.	488		FE	II	2990.237	2989.367	0	291.	488
FE	II	2959.391	5	398.	488		FE	II	2990.601	2989.731	1	291.	488
FE	II	2960.467	3	254.	896		FE	II	2992.114	2991.244	1	252.	488
FE	II	2960.702	4	403.	896		FE	II	2992.687	2991.817	20	398.	488
FE	II	2960.705	70	439.	488		FE	II	2994.237	2993.366	5	335.	488
FE	II	2961.983	0	403.	488		FE	II	2998.089	2997.216	3		896
FE	II	2962.136	110	60.	488		FE	II	2998.170	2997.298	220	335.	488
FE	II	2963.801	5	398.	488		FE	II	2998.621	2997.749	0	292.	488
FE	II	2964.733	6	439.	896		FE	II	2999.534	2998.662	0	422.	488
FE	II	2964.996	220	252.	488		FE	II	2999.727	2998.855	20	252.	488
FE	II	2965.494	360	78.	488		FE	II	3000.932	3000.059	110	276.	488

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	3003.074	3002.199	6		896		FE	II	3090.284	3089.388	4	158.	1015	
FE	II	3003.203	3002.330	5	98.	1015		FE	II	3097.194	3096.296	5	97.	1015	
FE	II	3003.523	3002.650	750	78.	488	H	FE	II	3098.313	3097.415	2	96.	1015	
FE	II	3004.780	3003.907	1		645		FE	II	3106.066	3105.166	5	82.	1015	
FE	II	3005.123	3004.249	20	276.	488		FE	II	3106.066	3105.166	5	122.	1015	
FE	II	3011.051	3010.174	4	181.	896		FE	II	3106.448	3105.548	5	82.	1015	
FE	II	3013.47	3012.59	0	276.	488		FE	II	3107.460	3106.559	4	68.	1015	
FE	II	3014.679	3013.802	0	124.	1015		FE	II	3115.198	3114.295	7	82.	1015	
FE	II	3020.889	3020.009	60	110.	896		FE	II	3115.583	3114.680	4	82.	1015	
FE	II	3022.286	3021.407	5	251.	488		FE	II	3116.395	3115.492	1	96.	1015	
FE	II	3024.739	3023.859	1	84.	1015		FE	II	3117.494	3116.590	6	82.	1015	
FE	II	3030.562	3029.681	0	124.	1015		FE	II	3118.409	3117.505	0	226.	1015	
FE	II	3034.327	3033.445	2	181.	1015		FE	II	3120.928	3120.023	1	96.	1015	
FE	II	3035.595	3034.712	0	84.	1015		FE	II	3129.917	3129.013	1	96.	1015	
FE	II	3037.848	3036.964	40	181.	896		FE	II	3131.466	3130.561	2	66.	1015	
FE	II	3039.661	3038.777	3	84.	1015		FE	II	3132.624	3131.719	4	107.	1015	
FE	II	3041.713	3040.829	0	123.	1015		FE	II	3133.953	3133.048	4	82.	1015	
FE	II	3044.20	3043.31	0	138.	1015	P	FE	II	3136.266	3135.360	9	82.	1015	
FE	II	3045.729	3044.843	5	98.	1015		FE	II	3139.114	3138.207	1	227.	1015	
FE	II	3046.196	3045.313	0	179.	645		FE	II	3141.600	3140.692	1	227.	1015	
FE	II	3047.561	3046.675	1	179.	1015		FE	II	3143.128	3142.220	0	7.	1015	
FE	II	3049.881	3048.994	4	181.	896		FE	II	3145.660	3144.751	5	82.	1015	
FE	II	3056.240	3055.351	5	181.	896		FE	II	3147.657	3146.748	2	67.	1015	
FE	II	3057.688	3056.802	5	109.	1015		FE	II	3155.115	3154.201	6	66.	896	
FE	II	3060.910	3060.023	0	109.	1015		FE	II	3156.862	3155.950	2	67.	1015	
FE	II	3063.122	3062.234	9	108.	1015		FE	II	3162.859	3161.945	5	7.	1015	
FE	II	3064.702	3063.814	1		645		FE	II	3163.713	3162.799	8	120.	1015	
FE	II	3066.207	3065.316	4	97.	896		FE	II	3164.005	3163.091	5	7.	1015	
FE	II	3069.616	3068.724	3	122.	896		FE	II	3164.787	3163.871	6	79.	896	
FE	II	3071.481	3070.591	00	83.	1015		FE	II	3165.191	3164.275	5	79.	896	
FE	II	3071.582	3070.692	4	68.	1015		FE	II	3166.853	3165.936	3		896	
FE	II	3072.017	3071.124	5	181.	896		FE	II	3167.585	3166.670	4	6.	1015	
FE	II	3072.544	3071.653	2	123.	1015		FE	II	3168.774	3167.957	6		896	
FE	II	3076.120	3075.228	2	68.	1015		FE	II	3171.253	3170.337	6	6.	1015	
FE	II	3077.329	3076.435	3	181.	896		FE	II	3175.994	3175.077	4	157.	1015	
FE	II	3078.064	3077.170	4	108.	896		FE	II	3178.176	3177.260	1	79.	645	
FE	II	3079.575	3078.681	5	181.	896		FE	II	3178.455	3177.536	5	82.	896	
FE	II	3080.249	3079.356	0	122.	1015		FE	II	3180.423	3179.504	8	157.	1015	
FE	II	3081.298	3080.405	2	108.	1015		FE	II	3181.083	3180.164	7	157.	1015	
FE	II	3083.918	3083.024	3	97.	1015		FE	II	3184.035	3183.115	8	7.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	3186.015	3185.095	1	67.	1015		FE	II	3262.446	3261.509	1	195.	645	
FE	II	3186.235	3185.315	5	7.	1015		FE	II	3267.879	3266.938	4	65.	1015	
FE	II	3187.662	3186.741	4	6.	896		FE	II	3267.976	3267.035	3	80.	1015	
FE	II	3188.215	3187.294	8	120.	1015		FE	II	3269.453	3268.512	3	118.	1015	
FE	II	3192.296	3191.374	1	79.	1015		FE	II	3270.714	3269.772	2	118.	1015	
FE	II	3192.981	3192.059	3	66.	1015		FE	II	3274.442	3273.499	3	118.	1015	
FE	II	3193.840	3192.917	9	6.	1015		FE	II	3277.550	3276.606	5	92.	1015	
FE	II	3194.732	3193.809	11	6.	1015		FE	II	3278.291	3277.347	9	1.	1015	
FE	II	3194.817	3193.893	4	67.	896		FE	II	3278.797	3277.853	0	65.	1015	
FE	II	3196.999	3196.076	12	7.	896		FE	II	3280.594	3279.649	2	118.	1015	
FE	II	3204.435	3203.509	1	79.	1015		FE	II	3282.238	3281.293	7	1.	1015	
FE	II	3204.667	3203.741	0	196.	1015		FE	II	3285.942	3284.996	0	93.	1015	
FE	II	3210.527	3209.603	1	137.	1015		FE	II	3286.363	3285.417	8	1.	896	
FE	II	3211.374	3210.449	10	6.	1015		FE	II	3288.415	3287.468	1	118.	1015	
FE	II	3211.997	3211.072	1	95.	1015		FE	II	3290.294	3289.347	7	65.	1015	
FE	II	3214.239	3213.310	6	6.	896		FE	II	3296.186	3295.240	4	79.	1015	
FE	II	3221.763	3220.835	0	106.	1015		FE	II	3296.760	3295.814	6	1.	1015	
FE	II	3223.855	3222.924	8	896			FE	II	3297.772	3296.826	2	92.	1015	
FE	II	3227.307	3226.378	2	178.	1015		FE	II	3298.835	3297.888	5	91.	1015	
FE	II	3228.662	3227.732	13	6.	1015		FE	II	3301.003	3300.056	00	228.	1015	
FE	II	3231.352	3230.420	20		896		FE	II	3303.809	3302.861	4	1.	1015	
FE	II	3231.426	3230.496	1	95.	1015		FE	II	3304.414	3303.466	4	1.	1015	
FE	II	3232.633	3231.702	5	80.	1015		FE	II	3305.382	3304.433	1	93.	1015	
FE	II	3232.956	3232.023	4		896		FE	II	3306.583	3305.634	1	79.	1015	
FE	II	3233.722	3232.791	7	119.	1015		FE	II	3313.658	3312.707	1	1.	1015	
FE	II	3235.855	3234.923	0	1.	1015		FE	II	3314.947	3313.996	1	1.	1015	
FE	II	3238.334	3237.402	5	81.	1015		FE	II	3319.815	3318.862	0	135.	1015	
FE	II	3238.748	3237.815	8	81.	1015		FE	II	3322.443	3321.491	1	194.	645	
FE	II	3242.619	3241.685	2	80.	1015		FE	II	3324.020	3323.066	8	92.	1015	
FE	II	3244.657	3243.723	8	119.	1015		FE	II	3325.792	3324.838	1	194.	645	
FE	II	3248.113	3247.177	4	81.	896		FE	II	3325.966	3325.012	1	93.	1015	
FE	II	3248.327	3247.392	3	119.	1015		FE	II	3328.625	3327.667	4	64.	896	
FE	II	3250.597	3249.657	4	81.	1015		FE	II	3330.002	3329.045	4		896	
FE	II	3250.847	3249.911	1	78.	1015		FE	II	3339.480	3338.522	3	76.	1015	
FE	II	3253.368	3252.430	6	78.	896		FE	II	3358.929	3357.965	0	117.	1015	
FE	II	3256.822	3255.884	8	1.	1015		FE	II	3359.216	3358.252	3	77.	1015	
FE	II	3258.296	3257.358	1	94.	1015		FE	II	3361.068	3360.103	3	105.	1015	
FE	II	3258.832	3257.894	3	178.	1015		FE	II	3361.237	3360.272	4		896	
FE	II	3259.714	3258.774	5	81.	896		FE	II	3363.729	3362.764	0	78.	1015	
FE	II	3259.992	3259.052	3	81.	896		FE	II	3365.231	3364.264	4	5.	896	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	II	3509.213	3508.213	1	4.	1015	
FE	II	3516.821	3515.818	2	208.	1015	
FE	III	2000.228	1999.582	200	81.	188	
FE	III	2000.688	2000.041	40	.	188	
FE	III	2001.814	2001.167	25	55.	188	
FE	III	2001.909	2001.262	40	55.	188	
FE	III	2002.01	2001.36	4	.	188	
FE	III	2002.473	2001.826	60	.	188	
FE	III	2003.124	2002.477	25	.	188	
FE	III	2003.233	2002.586	10	.	188	
FE	III	2004.143	2003.495	150	55.	188	
FE	III	2005.613	2004.965	4	.	188	
FE	III	2005.731	2005.083	40	55.	188	
FE	III	2006.095	2005.447	4	.	188	
FE	III	2006.360	2005.712	40	.	188	
FE	III	2006.914	2006.265	25	55.	188	
FE	III	2008.494	2007.845	90	55.	188	
FE	III	2009.118	2008.469	40	55.	188	
FE	III	2011.031	2010.383	25	.	188	
FE	III	2012.192	2011.544	40	86.	188	
FE	III	2012.310	2011.662	4	86.	188	
FE	III	2012.539	2011.890	25	.	188	
FE	III	2013.330	2012.681	40	86.	188	
FE	III	2015.453	2014.804	4	.	188	
FE	III	2015.720	2015.070	25	86.	188	
FE	III	2017.363	2016.713	25	.	188	
FE	III	2017.946	2017.296	40	.	188	
FE	III	2019.225	2018.574	25	.	188	
FE	III	2022.685	2022.033	4	.	188	
FE	III	2023.944	2023.289	4	.	188	
FE	III	2025.947	2025.292	1	.	188	
FE	III	2026.213	2025.557	25	.	188	
FE	III	2026.694	2026.038	40	.	188	
FE	III	2030.178	2029.522	10	.	188	
FE	III	2031.423	2030.767	10	.	188	
FE	III	2034.953	2034.296	25	.	188	
FE	III	2035.194	2034.537	4	.	188	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	III	2035.352	2034.695	40	.	188	FE	III	2037.804	2037.145	10	.	188
FE	III	2035.760	2035.103	10	.	188	FE	III	2037.950	2037.292	40	.	188
FE	III	2036.596	2035.939	10	.	188	FE	III	2038.236	2037.578	4	.	188
FE	III	2036.663	2036.006	10	.	188	FE	III	2038.750	2038.092	25	.	188
FE	III	2037.502	2036.845	10	60.	188	FE	III	2039.279	2038.621	4	.	188
							FE	III	2039.400	2038.742	10	.	188
							FE	III	2039.566	2038.908	10	60.	188
							FE	III	2040.165	2039.507	90	134.	188
							FE	III	2041.065	2040.407	25	71.	188
							FE	III	2041.196	2040.538	40	.	188
							FE	III	2041.418	2040.760	10	.	188
							FE	III	2042.895	2042.236	10	.	188
							FE	III	2044.137	2043.478	25	.	188
							FE	III	2044.693	2044.034	25	71.	188
							FE	III	2044.961	2044.302	40	71.	188
							FE	III	2045.200	2044.541	4	.	188
							FE	III	2045.629	2044.970	40	60.	188
							FE	III	2046.489	2045.830	60	.	188
							FE	III	2046.704	2046.043	4	.	188
							FE	III	2047.443	2046.784	10	.	188
							FE	III	2047.785	2047.126	10	.	188
							FE	III	2050.044	2049.384	120	71.	188
							FE	III	2051.399	2050.739	120	60.	188
							FE	III	2052.507	2051.847	10	.	188
							FE	III	2052.929	2052.269	25	.	188
							FE	III	2054.182	2053.521	25	.	188
							FE	III	2055.141	2054.480	40	.	188
							FE	III	2056.516	2055.855	90	105.	188
							FE	III	2056.806	2056.145	120	71.	188
							FE	III	2057.719	2057.058	90	78.	188
							FE	III	2058.582	2057.921	40	.	188
							FE	III	2058.862	2058.201	25	.	188
							FE	III	2059.221	2058.560	150	100.	188
							FE	III	2060.339	2059.677	120	78.	188
							FE	III	2062.214	2061.552	250	48.	188
													H
							FE	III	2062.413	2061.751	200	78.	188
							FE	III	2062.745	2062.083	25	.	188
							FE	III	2063.645	2062.983	25	.	188
							FE	III	2065.931	2065.268	25	.	188
							FE	III	2067.965	2067.302	90	124.	188

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	III	2068.906	2068.243	350	48.	188	H	FE	III	2100.001	2099.332	90	129.	188	
FE	III	2070.472	2069.808	10	.	188		FE	III	2100.200	2099.531	10	.	188	
FE	III	2071.203	2070.539	150	99.	188		FE	III	2100.387	2099.718	4	.	188	
FE	III	2071.640	2070.976	10	.	188		FE	III	2101.630	2100.961	150	129.	188	
FE	III	2072.553	2071.889	10	.	188		FE	III	2104.317	2103.647	60	66.	188	
FE	III	2074.904	2074.240	25	.	188		FE	III	2104.469	2103.799	350	66.	188	H
FE	III	2076.981	2076.316	25	.	188		FE	III	2105.690	2105.020	60	146.	188	
FE	III	2077.581	2076.916	4	.	188		FE	III	2107.030	2106.360	25	.	188	
FE	III	2077.754	2077.089	4	.	188		FE	III	2107.995	2107.324	250	66.	188	H
FE	III	2078.420	2077.755	40	105.	188		FE	III	2108.888	2103.217	10	.	188	
FE	III	2079.654	2078.989	500	48.	188	H	FE	III	2109.347	2108.676	60	105.	188	
FE	III	2079.972	2079.307	25	.	188		FE	III	2112.466	2111.795	40	.	188	
FE	III	2083.043	2082.377	25	.	188		FE	III	2112.954	2112.282	10	.	188	
FE	III	2083.454	2082.788	4	.	188		FE	III	2113.168	2112.496	40	.	188	
FE	III	2084.196	2083.530	90	124.	188		FE	III	2114.016	2113.344	60	.	188	
FE	III	2085.015	2084.349	250	67.	188		FE	III	2114.563	2113.891	90	.	188	
FE	III	2085.181	2084.515	25	67.	188		FE	III	2115.011	2114.339	25	.	188	
FE	III	2085.636	2084.968	60	77.	188		FE	III	2117.260	2116.588	120	58.	188	
FE	III	2086.506	2085.839	60	.	188		FE	III	2119.088	2118.415	60	58.	188	
FE	III	2086.795	2086.128	40	105.	188		FE	III	2119.240	2118.567	90	58.	188	
FE	III	2087.799	2087.132	150	77.	188		FE	III	2120.912	2120.239	60	58.	188	
FE	III	2088.574	2087.907	120	77.	188		FE	III	2121.440	2120.767	40	58.	188	
FE	III	2089.292	2088.625	60	67.	188		FE	III	2122.695	2122.021	60	.	188	
FE	III	2089.756	2089.089	90	77.	188		FE	III	2124.264	2123.590	150	104.	188	
FE	III	2090.721	2090.053	120	124.	188		FE	III	2124.749	2124.075	10	.	188	
FE	III	2090.806	2090.139	350	67.	188		FE	III	2124.899	2124.225	40	.	188	
FE	III	2090.908	2090.240	90	59.	188		FE	III	2125.650	2124.976	25	.	188	
FE	III	2091.980	2091.312	120	77.	188		FE	III	2125.844	2125.170	40	.	188	
FE	III	2092.156	2091.488	10	.	188		FE	III	2128.309	2127.634	10	.	188	
FE	III	2093.613	2092.945	90	129.	188		FE	III	2129.913	2129.238	10	.	188	
FE	III	2094.172	2093.504	40	77.	188		FE	III	2130.358	2129.683	60	.	188	
FE	III	2095.811	2095.143	25	.	188		FE	III	2131.504	2130.829	25	.	188	
FE	III	2095.995	2095.327	25	105.	188		FE	III	2132.626	2131.951	25	.	188	
FE	III	2096.261	2095.593	10	.	188		FE	III	2132.765	2132.089	4	.	188	
FE	III	2096.356	2095.688	40	.	188		FE	III	2134.034	2133.358	10	.	188	
FE	III	2097.099	2096.430	90	59.	188		FE	III	2135.537	2134.861	200	98.	188	
FE	III	2098.149	2097.480	570	67.	188		FE	III	2136.199	2135.523	40	.	188	
FE	III	2098.361	2097.692	350	66.	188		FE	III	2137.036	2136.360	60	76.	188	
FE	III	2099.485	2098.816	25	.	188		FE	III	2137.685	2137.009	60	59.	188	
FE	III	2099.900	2099.231	60	66.	188		FE	III	2138.041	2137.365	150	58.	188	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	III	2140.138	2139.461	10	.	188	FE	III	2171.728	2171.045	350	70.	188
FE	III	2141.104	2140.427	40	.	188	FE	III	2171.976	2171.293	10	.	188
FE	III	2143.210	2142.533	25	.	188	FE	III	2174.513	2173.829	120	75.	188
FE	III	2143.723	2143.045	120	76.	188	FE	III	2175.342	2174.658	570	70.	188
FE	III	2144.148	2143.470	150	59.	188	FE	III	2176.656	2175.972	10	.	188
FE	III	2144.44	2143.76	25	59.	188	FE	III	2179.362	2178.677	60	.	188
FE	III	2144.505	2143.827	120	58.	188	FE	III	2179.756	2179.071	25	.	188
FE	III	2144.960	2144.282	150	58.	188	FE	III	2179.943	2179.258	90	75.	188
FE	III	2145.421	2144.743	120	98.	188	FE	III	2181.095	2180.410	350	70.	188
FE	III	2146.294	2145.616	90	59.	188	FE	III	2181.895	2181.210	10	123.	188
FE	III	2146.740	2146.062	150	59.	188	FE	III	2182.092	2181.407	40	122.	188
FE	III	2147.017	2146.339	90	59.	188	FE	III	2182.725	2182.040	40	.	188
FE	III	2148.582	2147.904	120	59.	188	FE	III	2183.574	2182.889	40	75.	188
FE	III	2148.933	2148.254	60	.	188	FE	III	2184.666	2183.980	90	65.	188
FE	III	2150.237	2149.558	10	.	188	FE	III	2184.800	2184.114	40	122.	188
FE	III	2152.455	2151.776	570	112.	188	FE	III	2185.766	2185.080	25	.	188
FE	III	2153.385	2152.706	90	141.	188	FE	III	2185.950	2185.264	60	.	188
FE	III	2154.000	2153.320	25	98.	188	FE	III	2186.23	2185.54	25	.	188
FE	III	2155.100	2154.420	10	.	188	FE	III	2186.340	2185.654	60	65.	188
FE	III	2156.550	2155.870	60	.	188	FE	III	2186.893	2186.207	10	75.	188
FE	III	2156.863	2156.183	60	.	188	FE	III	2187.562	2186.876	90	.	188
FE	III	2157.430	2156.750	10	.	188	FE	III	2188.353	2187.667	60	.	188
FE	III	2157.789	2157.109	10	65.	188	FE	III	2189.419	2188.732	40	.	188
FE	III	2157.967	2157.287	25	65.	188	FE	III	2189.841	2189.154	10	.	188
FE	III	2158.390	2157.710	350	70.	188	FE	III	2190.762	2190.075	25	122.	188
FE	III	2158.627	2158.006	25	.	188	FE	III	2191.902	2191.215	150	65.	188
FE	III	2159.153	2158.472	350	145.	188	FE	III	2193.562	2192.875	40	.	188
FE	III	2159.371	2158.690	25	.	188	FE	III	2193.982	2193.294	60	.	188
FE	III	2161.336	2160.655	90	140.	188	FE	III	2195.769	2195.081	60	123.	188
FE	III	2161.951	2161.270	250	70.	188	FE	III	2196.220	2195.532	90	123.	188
FE	III	2162.159	2161.478	25	.	188	FE	III	2196.554	2195.866	60	74.	188
FE	III	2162.964	2162.283	60	140.	188	FE	III	2196.928	2196.240	10	.	188
FE	III	2164.157	2163.475	10	.	188	FE	III	2203.148	2202.458	150	74.	188
FE	III	2164.741	2164.059	40	.	188	FE	III	2208.537	2207.847	10	.	188
FE	III	2165.753	2165.071	40	.	188	FE	III	2209.54	2208.85	250	110.	188
FE	III	2166.009	2165.327	40	.	188	FE	III	2210.430	2209.739	60	123.	188
FE	III	2167.286	2166.604	60	.	188	FE	III	2210.764	2210.073	90	110.	188
FE	III	2167.634	2166.952	350	70.	188	FE	III	2215.308	2214.616	40	69.	188
FE	III	2168.789	2168.106	25	.	188	FE	III	2218.177	2217.485	60	.	188
FE	III	2170.392	2169.709	60	140.	188	FE	III	2221.304	2220.611	25	69.	188

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	III	2222.030	2221.337	10	.	188	FE	III	2265.160	2264.459	5	.	288
FE	III	2222.523	2221.830	250	69.	188	FE	III	2266.24	2265.54	40	.	188
FE	III	2228.543	2227.848	120	69.	188	FE	III	2268.12	2267.42	250	133.	188
FE	III	2229.576	2228.881	40	122.	188	FE	III	2272.260	2271.558	20	.	288
FE	III	2229.962	2229.267	250	128.	188	FE	III	2273.251	2272.549	20	.	288
FE	III	2231.066	2230.373	20	.	288	FE	III	2273.453	2272.751	110	.	288
FE	III	2232.365	2231.670	40	139.	188	FE	III	2274.70	2274.00	150	153.	188
FE	III	2233.126	2232.430	250	64.	188	FE	III	2277.575	2276.870	150	73.	188
FE	III	2233.386	2232.690	250	139.	188	FE	III	2277.864	2277.159	40	.	188
FE	III	2233.868	2233.172	40	122.	188	FE	III	2278.525	2277.820	150	127.	188
FE	III	2234.244	2233.548	150	.	188	FE	III	2279.137	2278.432	90	127.	188
FE	III	2234.350	2233.654	90	128.	188	FE	III	2281.002	2280.298	70	.	288
FE	III	2235.17	2234.47	20	.	288	FE	III	2285.34	2284.64	40	.	288
FE	III	2236.395	2235.699	90	69.	188	FE	III	2285.63	2284.92	110	.	288
FE	III	2236.604	2235.908	250	139.	188	FE	III	2285.685	2284.979	60	73.	188
FE	III	2238.852	2238.155	250	139.	188	FE	III	2285.75	2285.04	40	.	288
FE	III	2242.24	2241.54	350	109.	188	FE	III	2289.845	2289.139	40	.	288
FE	III	2243.911	2243.215	40	.	288	FE	III	2290.832	2290.126	110	153.	288
FE	III	2244.103	2243.405	150	64.	188	FE	III	2292.416	2291.710	20	.	288
FE	III	2244.543	2243.845	40	.	188	FE	III	2292.558	2291.850	90	156.	188
FE	III	2246.474	2245.776	40	128.	188	FE	III	2293.764	2293.056	250	156.	188
FE	III	2250.14	2249.45	1	.	288	FE	III	2295.54	2294.83	1	.	288
FE	III	2250.67	2249.97	70	.	288	FE	III	2296.569	2295.859	570	.	188
FE	III	2251.154	2250.456	70	.	288	FE	III	2303.518	2302.808	150	152.	188
FE	III	2251.802	2251.104	5	.	288	FE	III	2303.722	2303.012	120	138.	188
FE	III	2252.968	2252.268	60	64.	188	FE	III	2303.913	2303.203	25	138.	188
FE	III	2253.163	2252.463	40	64.	188	FE	III	2304.434	2303.725	20	.	288
FE	III	2254.412	2253.712	25	.	188	FE	III	2307.282	2306.571	60	.	188
FE	III	2256.6	2255.9	150	.	288	FE	III	2310.290	2309.578	40	144.	188
FE	III	2258.107	2257.406	150	73.	188	FE	III	2311.518	2310.806	25	.	188
FE	III	2259.636	2258.936	20	.	288	FE	III	2312.292	2311.580	40	.	188
FE	III	2259.841	2259.140	10	.	188	FE	III	2316.01	2315.30	60	.	188
FE	III	2259.94	2259.24	5	.	288	FE	III	2316.41	2315.70	250	.	188
FE	III	2260.107	2259.406	10	.	188	FE	III	2318.816	2318.102	60	.	188
FE	III	2261.248	2260.547	120	64.	188	FE	III	2319.935	2319.220	250	72.	188
FE	III	2262.294	2261.592	350	111.	188	FE	III	2320.180	2319.466	150	144.	188
FE	III	2262.77	2262.07	1	.	288	FE	III	2322.42	2321.71	250	132.	188
FE	III	2263.588	2262.888	40	111.	288	FE	III	2324.501	2323.786	40	.	188
FE	III	2264.177	2263.477	40	.	288	FE	III	2325.074	2324.359	150	156.	188
FE	III	2264.889	2264.188	40	.	288	FE	III	2327.663	2326.948	250	121.	188

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	III	2328.383	2327.668	40	.	188		FE	III	2507.999	2507.244	10	.	188	
FE	III	2330.446	2329.730	10	.	188		FE	III	2512.174	2511.418	90	93.	188	
FE	III	2330.621	2329.905	200	72.	188		FE	III	2513.658	2512.902	10	93.	188	
FE	III	2332.10	2331.38	F	72.	188		FE	III	2520.920	2520.162	60	93.	188	
FE	III	2332.255	2331.539	25	.	188		FE	III	2532.650	2531.890	60	92.	188	
FE	III	2337.485	2336.768	250	121.	188		FE	III	2538.299	2537.537	40	137.	188	
FE	III	2339.31	2338.59	40	.	188		FE	III	2538.696	2537.934	10	92.	188	
FE	III	2339.679	2338.961	250	72.	188		FE	III	2546.514	2545.750	25	92.	188	
FE	III	2340.631	2339.913	60	151.	188		FE	III	2551.863	2551.098	90	130.	188	
FE	III	2347.681	2346.961	25	72.	188		FE	III	2553.702	2552.937	60	150.	188	
FE	III	2353.337	2352.616	25	.	188		FE	III	2556.973	2556.207	60	92.	188	
FE	III	2354.541	2353.820	40	.	188		FE	III	2558.939	2558.172	10	.	188	
FE	III	2361.01	2360.28	F	121.	188		FE	III	2575.608	2574.838	120	80.	188	
FE	III	2363.124	2362.401	25	.	188		FE	III	2576.569	2575.798	10	.	188	
FE	III	2364.23	2363.51	120	.	188		FE	III	2583.14	2582.37	150	80.	188	
FE	III	2374.629	2373.904	60	115.	188		FE	III	2584.511	2583.739	25	137.	188	
FE	III	2377.451	2376.725	60	115.	188		FE	III	2584.811	2584.038	90	137.	188	
FE	III	2390.262	2389.533	150	131.	188		FE	III	2590.817	2590.043	25	.	188	
FE	III	2404.283	2403.551	90	114.	188		FE	III	2593.307	2592.533	10	.	188	
FE	III	2407.142	2406.409	25	.	188		FE	III	2595.45	2594.67	40	.	188	
FE	III	2419.303	2418.568	120	47.	188		FE	III	2596.397	2595.622	150	80.	188	
FE	III	2420.477	2419.742	10	.	188		FE	III	2603.13	2602.35	10	.	188	
FE	III	2421.141	2420.405	25	103.	188		FE	III	2603.963	2603.186	25	.	188	
FE	III	2422.112	2421.376	10	.	188		FE	III	2608.890	2608.112	120	91.	188	
FE	III	2422.250	2421.514	60	103.	188		FE	III	2609.460	2608.682	60	136.	188	
FE	III	2429.54	2428.80	F	114.	188		FE	III	2617.668	2616.888	10	.	188	
FE	III	2432.063	2431.325	60	114.	188		FE	III	2617.929	2617.149	150	142.	188	
FE	III	2438.914	2438.174	150	47.	188		FE	III	2618.70	2617.92	10	.	188	
FE	III	2440.703	2439.963	25	.	188		FE	III	2626.050	2625.268	25	91.	188	
FE	III	2448.116	2447.374	120	143.	188		FE	III	2631.310	2630.527	10	91.	188	
FE	III	2457.315	2456.571	10	.	188		FE	III	2634.603	2633.819	40	.	188	
FE	III	2463.723	2462.978	25	.	188		FE	III	2642.194	2641.408	60	91.	188	
FE	III	2469.872	2469.126	25	.	188		FE	III	2646.17	2645.39	200	.	188	
FE	III	2485.570	2484.820	10	.	188		FE	III	2647.538	2646.751	90	91.	188	
FE	III	2486.491	2485.741	25	.	188		FE	III	2656.076	2655.286	40	.	288	
FE	III	2487.942	2487.191	40	.	188		FE	III	2660.404	2659.614	40	91.	188	
FE	III	2488.672	2487.922	25	.	188		FE	III	2661.605	2660.815	40	.	188	
FE	III	2497.449	2496.696	25	.	188		FE	III	2663.122	2662.331	40	.	188	
FE	III	2502.280	2501.526	40	.	188		FE	III	2666.144	2665.351	40	.	288	
FE	III	2503.657	2502.903	25	.	188		FE	III	2669.02	2668.23	20	.	288	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	III	2675.214	2674.419	5	.	288	FE	III	2814.00	2813.17	25	.	188
FE	III	2675.913	2675.118	40	.	288	FE	III	2814.068	2813.241	250	120.	188
FE	III	2678.211	2677.417	25	91.	188	FE	III	2816.590	2815.761	110	.	288
FE	III	2679.604	2678.810	90	149.	188	FE	III	2817.427	2816.600	25	.	188
FE	III	2683.185	2682.388	70	.	288	FE	III	2819.452	2818.624	90	157.	188
FE	III	2695.950	2695.150	450	159.	288	FE	III	2821.010	2820.180	20	.	288
FE	III	2696.114	2695.314	360	159.	288	FE	III	2822.493	2821.665	10	.	188
FE	III	2696.727	2695.929	25	.	188	FE	III	2834.206	2833.373	20	.	288
FE	III	2697.705	2696.905	220	159.	288	FE	III	2836.76	2835.92	5	.	288
FE	III	2698.14	2697.34	70	159.	288	FE	III	2836.939	2836.107	40	126.	188
FE	III	2699.062	2698.261	20	.	288	FE	III	2839.212	2838.377	5	.	288
FE	III	2699.215	2698.414	220	159.	288	FE	III	2839.424	2838.589	5	.	288
FE	III	2700.846	2700.045	285	159.	288	FE	III	2839.757	2838.924	10	.	188
FE	III	2701.93	2701.13	220	159.	288	FE	III	2841.81	2840.98	20	.	288
FE	III	2703.459	2702.657	40	.	288	FE	III	2843.702	2842.869	10	.	188
FE	III	2705.226	2704.424	20	.	288	FE	III	2844.613	2843.779	40	126.	188
FE	III	2705.23	2704.43	25	159.	188	FE	III	2851.123	2850.288	120	155.	188
FE	III	2705.91	2705.10	120	159.	188	FE	III	2851.416	2850.581	25	.	188
FE	III	2705.919	2705.117	220	.	288	FE	III	2851.711	2850.873	40	.	288
FE	III	2706.98	2706.17	10	159.	188	FE	III	2851.966	2851.130	40	.	188
FE	III	2707.013	2706.210	20	.	288	FE	III	2852.31	2851.47	20	.	288
FE	III	2710.046	2709.243	70	.	288	FE	III	2855.026	2854.190	40	.	188
FE	III	2710.752	2709.949	20	.	288	FE	III	2859.501	2858.664	120	126.	188
FE	III	2721.185	2720.381	60	113.	188	FE	III	2860.13	2859.29	5	.	288
FE	III	2729.279	2728.473	25	.	188	FE	III	2860.31	2859.47	5	.	288
FE	III	2742.761	2741.952	10	90.	188	FE	III	2860.448	2859.608	20	.	288
FE	III	2746.745	2745.935	10	.	188	FE	III	2863.246	2862.405	5	.	288
FE	III	2768.73	2767.92	10	.	188	FE	III	2863.352	2862.511	5	.	288
FE	III	2773.161	2772.344	25	.	188	FE	III	2866.38	2865.54	25	89.	188
FE	III	2774.123	2773.306	150	158.	188	FE	III	2867.641	2866.799	20	.	288
FE	III	2779.686	2778.868	60	120.	188	FE	III	2868.976	2868.136	60	155.	188
FE	III	2780.303	2779.483	110	.	288	FE	III	2871.06	2870.22	40	.	288
FE	III	2789.079	2788.258	90	120.	188	FE	III	2872.828	2871.985	5	.	288
FE	III	2790.519	2789.698	60	.	188	FE	III	2874.636	2873.795	40	155.	188
FE	III	2793.11	2792.29	10	.	188	FE	III	2876.553	2875.711	10	.	188
FE	III	2797.690	2796.866	20	.	288	FE	III	2880.48	2879.64	5	.	288
FE	III	2803.599	2802.773	110	.	288	FE	III	2884.066	2883.220	5	.	288
FE	III	2804.341	2803.441	90	120.	188	FE	III	2890.845	2890.000	25	.	188
FE	III	2809.801	2808.974	20	.	288	FE	III	2893.164	2892.318	25	.	188
FE	III	2812.652	2811.824	20	.	288	FE	III	2893.372	2892.524	20	.	288

SPECTRUM		VACUUM WAVELENGT I	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
FE	III	2894.638	2893.792	60	.	188		FE	III	2997.916	2997.042	5	.	288	
FE	III	2895.922	2895.076	150	125.	188		FE	III	3001.714	3000.839	20	88.	288	
FE	III	2896.310	2895.464	25	.	188		FE	III	3002.461	3001.589	350	87.	188	
FE	III	2897.182	2896.333	5	.	288		FE	III	3002.492	3001.617	650	9.	288	
FE	III	2899.61	2898.77	25	.	188		FE	III	3003.86	3002.99	70	9.	288	
FE	III	2900.233	2899.386	40	125.	188		FE	III	3004.156	3003.282	1	89.	1015	
FE	III	2901.385	2900.535	40	.	288		FE	III	3005.01	3004.13	40	21.	288	
FE	III	2902.26	2901.41	5	.	288		FE	III	3005.364	3004.490	1	41.	1015	
FE	III	2903.32	2902.47	200	.	188		FE	III	3006.995	3006.122	40	.	188	
FE	III	2905.279	2904.431	350	125.	188		FE	III	3007.018	3006.142	70	21.	288	
FE	III	2906.65	2905.80	150	148.	188		FE	III	3007.86	3006.99	20	21.	288	
FE	III	2908.346	2907.497	250	10.	188		FE	III	3007.93	3007.06	220	.	288	
FE	III	2908.550	2907.701	350	125.	188		FE	III	3008.02	3007.14	40	.	288	
FE	III	2909.500	2908.651	60	125.	188		FE	III	3008.10	3007.22	110	116.	288	
FE	III	2916.831	2915.980	10	10.	188		FE	III	3008.152	3007.275	650	.	288	
FE	III	2923.322	2922.467	5	.	288		FE	III	3008.338	3007.461	160	.	288	
FE	III	2924.755	2923.902	150	102.	188		FE	III	3008.477	3007.600	110	.	288	
FE	III	2933.192	2932.337	60	.	188		FE	III	3008.670	3007.793	285	10.	288	
FE	III	2935.635	2934.779	25	.	188		FE	III	3009.388	3008.511	160	9.	288	
FE	III	2939.923	2939.066	10	.	188		FE	III	3010.874	3009.998	1	41.	1015	
FE	III	2940.129	2939.269	5	.	288		FE	III	3011.936	3011.060	1	31.	1015	
FE	III	2940.41	2939.55	120	.	188		FE	III	3013.723	3012.847	2	10.	1015	
FE	III	2942.677	2941.817	20	.	288		FE	III	3014.045	3013.167	1000	9.	288	
FE	III	2943.848	2942.989	40	.	188		FE	III	3016.139	3015.260	160	9.	288	
FE	III	2944.058	2943.197	70	.	288		FE	III	3018.19	3017.31	20	.	288	
FE	III	2947.723	2946.864	25	.	188		FE	III	3019.669	3018.789	160	10.	288	
FE	III	2949.247	2948.388	150	9.	188		FE	III	3022.88	3022.00	40	76.	288	
FE	III	2951.155	2950.295	40	.	188		FE	III	3024.764	3023.883	220	10.	288	
FE	III	2952.499	2951.639	25	.	188		FE	III	3027.010	3026.129	20	.	288	
FE	III	2952.862	2951.999	5	.	288		FE	III	3027.888	3027.006	160	21.	288	
FE	III	2955.921	2955.060	40	9.	188		FE	III	3028.373	3027.491	20	10.	288	
FE	III	2957.167	2956.303	5	.	288		FE	III	3028.65	3027.76	1	.	288	
FE	III	2959.148	2958.286	90	102.	188		FE	III	3036.672	3035.788	20	30.	288	
FE	III	2964.093	2963.230	150	9.	188		FE	III	3040.460	3039.576	20	.	288	
FE	III	2966.511	2965.645	40	.	288		FE	III	3043.952	3043.067	2	91.	1015	
FE	III	2974.761	2973.896	60	9.	188		FE	III	3044.324	3043.439	1	91.	1015	
FE	III	2978.088	2977.222	90	9.	188		FE	III	3045.324	3044.438	5	.	1015	
FE	III	2978.438	2977.572	60	102.	188		FE	III	3046.763	3045.877	40	76.	288	
FE	III	2978.961	2978.091	5	.	288		FE	III	3047.082	3046.194	5	.	288	
FE	III	2981.586	2980.716	20	.	288		FE	III	3047.285	3046.399	00	78.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	III	3047.60	3046.71	20	92.	288		FE	III	3114.742	3113.839	5	13.	288	
FE	III	3048.005	3047.119	1	80.	1015		FE	III	3119.17	3118.26	20	.	288	
FE	III	3051.354	3050.467	40	10.	288		FE	III	3119.658	3118.754	70	51.	288	
FE	III	3055.026	3054.138	110	10.	288		FE	III	3120.164	3119.259	20	13.	288	
FE	III	3056.442	3055.554	20	10.	288		FE	III	3120.93	3120.03	20	29.	288	
FE	III	3060.258	3059.368	5	.	288		FE	III	3121.14	3120.24	1	1.	1015	
FE	III	3060.903	3060.013	5	.	288		FE	III	3121.767	3120.862	40	29.	288	
FE	III	3061.049	3060.159	5	.	288		FE	III	3121.98	3121.08	10	.	1015	
FE	III	3065.914	3065.023	5	.	288		FE	III	3124.058	3123.152	285	13.	288	
FE	III	3067.709	3066.817	5	.	288		FE	III	3129.94	3129.04	1	8.	1015	
FE	III	3068.924	3068.032	5	.	288		FE	III	3131.765	3130.858	20	.	288	
FE	III	3070.225	3069.335	4	1.	1015		FE	III	3136.706	3135.800	1	77.	1015	
FE	III	3070.54	3069.65	1	.	288		FE	III	3137.33	3136.43	450	39.	288	
FE	III	3070.983	3070.091	40	30.	288		FE	III	3137.39	3136.49	70	39.	288	
FE	III	3072.128	3071.238	5	1.	1015		FE	III	3140.99	3140.08	3	94.	1015	
FE	III	3084.6	3083.7	D	39.	288		FE	III	3143.13	3142.22	2	1.	1015	
FE	III	3084.96	3084.07	40	40.	288		FE	III	3144.297	3143.386	20	13.	288	
FE	III	3087.206	3086.311	6	.	1015		FE	III	3145.091	3144.180	5	.	288	
FE	III	3087.775	3086.880	00	81.	1015		FE	III	3152.77	3151.86	5	.	1015	
FE	III	3088.554	3087.659	1	77.	1015		FE	III	3159.06	3158.14	1	.	288	
FE	III	3090.545	3089.649	1	40.	1015		FE	III	3162.99	3162.07	1	.	288	
FE	III	3091.651	3090.754	20	.	288		FE	III	3165.603	3164.687	70	8.	288	
FE	III	3092.53	3091.63	70	.	288		FE	III	3168.470	3167.553	5	28.	288	
FE	III	3095.053	3094.156	1	78.	1015		FE	III	3169.13	3168.21	1	94.	1015	
FE	III	3095.201	3094.303	20	.	288		FE	III	3170.35	3169.43	40	.	288	
FE	III	3095.659	3094.761	5	.	288		FE	III	3171.87	3170.95	5	.	288	
FE	III	3097.72	3096.82	1	65.	288		FE	III	3175.007	3174.089	450	38.	288	
FE	III	3097.87	3096.97	5	.	288		FE	III	3175.249	3174.331	5	.	288	
FE	III	3099.83	3098.93	.	51.	1015		FE	III	3175.53	3174.61	1	.	288	
FE	III	3099.91	3099.01	5	65.	288		FE	III	3176.912	3175.993	450	38.	288	
FE	III	3101.21	3100.31	.	51.	1015		FE	III	3177.757	3176.838	40	38.	288	
FE	III	3101.370	3100.470	40	29.	288		FE	III	3178.92	3178.01	450	38.	288	
FE	III	3103.448	3102.548	5	29.	288		FE	III	3180.00	3179.08	1	38.	1015	
FE	III	3108.879	3107.977	160	29.	288		FE	III	3181.09	3180.17	.	38.	1015	P
FE	III	3109.75	3108.85	40	12.	288		FE	III	3186.87	3185.95	5	.	288	
FE	III	3110.222	3109.321	1	8.	1015		FE	III	3190.667	3189.745	40	55.	288	
FE	III	3110.49	3109.59	1	1.	1015		FE	III	3191.436	3190.514	5	.	288	
FE	III	3110.976	3110.074	285	39.	288		FE	III	3191.73	3190.81	8	.	1015	N
FE	III	3111.78	3110.88	40	29.	288		FE	III	3199.746	3198.822	110	6.	288	
FE	III	3112.519	3111.616	220	8.	288		FE	III	3202.562	3201.637	20	.	288	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
FE	V	2706.23	2705.43			229	F	FE	V	2818.59	2817.76			229	F
FE	V	2708.16	2707.36			229	F	FE	V	2818.70	2817.87			229	F
FE	V	2711.38	2710.58			229	F	FE	V	2825.19	2824.36			229	F
FE	V	2718.62	2717.82			229	F	FE	V	2825.62	2824.79			229	F
FE	V	2724.09	2723.28			229	F	FE	V	2825.97	2825.14			229	F
FE	V	2727.82	2727.01			229	F	FE	V	2829.07	2828.24			229	F
FE	V	2731.02	2730.21			229	F	FE	V	2829.08	2828.25			229	F
FE	V	2743.79	2742.98			229	F	FE	V	2832.61	2831.78			229	F
FE	V	2751.69	2750.88			229	F	FE	V	2835.78	2834.95			229	F
FE	V	2761.45	2760.64			229	F	FE	V	2856.20	2855.36			229	F
FE	V	2765.98	2765.17			229	F	FE	V	2866.94	2866.10			229	F
FE	V	2772.24	2771.42			229	F	FE	V	2882.34	2881.50			229	F
FE	V	2781.22	2780.40			229	F	FE	V	2957.4	2956.5			1034	
FE	V	2785.82	2785.00			229	F	FE	V	2961.33	2960.47			229	F
FE	V	2789.18	2788.36			229	F	FE	V	3072.45	3071.56			229	F
FE	V	2791.19	2790.37			229	F	FE	V	3076.54	3075.65			229	F
FE	V	2795.65	2794.83			229	F	FE	V	3084.42	3083.53			229	F
FE	V	2808.69	2807.87			229	F	FE	V	3103.91	3103.01			229	F
FE	V	2812.12	2811.29			229	F	FE	V	3108.09	3107.19			229	F
FE	V	2815.15	2814.32			229	F	FE	V	3116.13	3115.23			229	F
								FE	V	3127.15	3126.25			229	F
								FE	V	3131.42	3130.52			229	F
								FE	V	3143.86	3142.95			229	F
								FE	V	3173.48	3172.56			229	F
								FE	V	3177.84	3176.92			229	F
								FE	V	3363.64	3362.67			229	F
								FE	V	3369.84	3368.87			229	F
								FE	V	3375.30	3374.33			229	F
								FE	V	3401.38	3400.41			229	F
								FE	V	3407.86	3406.89			229	F
								FE	V	3430.85	3429.87			229	F
								FE	V	3446.61	3445.62			229	F
								FE	V	3464.50	3463.51			229	F
								FE	VI	2145.76	2145.08			228	F
								FE	VI	2163.69	2163.01			228	F
								FE	VI	2169.55	2168.87			228	F
								FE	VI	2181.78	2181.10			228	F
								FE	VI	2187.89	2187.21			228	F

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
FE	VI	2195.22	2194.54		228	F	GA	I	2372.01	2371.29	40	5.	488
FE	VI	2198.16	2197.47		228	F	GA	I	2419.42	2418.69	70	5.	488
FE	VI	2201.90	2201.21		228	F	GA	I	2450.819	2450.078	40	4.	488
FE	VI	2211.80	2211.11		228	F	GA	I	2500.940	2500.187	220	4.	488
FE	VI	2220.79	2220.10		228	F	GA	I	2501.468	2500.714	40	4.	488
FE	VI	2241.99	2241.30		228	F	GA	I	2608.25	2607.47	110	3.	488
FE	VI	2261.59	2260.89		228	F	GA	I	2625.60	2624.82	285	3.	488
FE	VI	2295.44	2294.73		228	F	GA	I	2633.44	2632.66	450	3.	488
FE	VI	2303.03	2302.32		228	F	GA	I	2660.662	2659.873	40	2.	488
FE	VI	2313.57	2312.86		228	F	GA	I	2665.84	2665.05	450	3.	488
FE	VI	2321.28	2320.57		228	F	GA	I	2692.09	2691.29	285	3.	488
FE	VI	2326.48	2325.77		228	F	GA	I	2720.468	2719.664	40	2.	488
FE	VI	3136.4	3135.5	1034			GA	I	2875.082	2874.240	160	1.	488
FE	VI	3394.0	3393.0	1034			GA	I	2944.498	2943.839	160	1.	488
FE	VI	3426.0	3425.0	1034			GA	I	2945.034	2944.175	160	1.	488
FE	VI	3493.10	3492.10		228	F	GA	II	2092.00	2091.34	1000	1.	652
FE	VI	3510.70	3509.70		228	F	GA	II	2378.25	2377.53	30		652
							GA	II	2439.62	2438.88	120		652
FE	VII	2515.3	2514.5		1034		GA	II	2514.31	2513.55	120		652
FE	VII	3303.9	3303.0		1034		GA	II	2514.91	2514.15	50		652
							GA	II	2552.02	2551.26	30		652
FE	VIII	2940.4	2939.5		1034		GA	II	2553.63	2552.87	50		652
FE	VIII	2972.4	2971.5		1034		GA	II	2556.05	2555.28	85		652
FE	VIII	3488.0	3487.0		1034		GA	II	2701.27	2700.47	1000	9.	652
							GA	II	2780.97	2780.15	650	8.	652
FE	IX	2043.01	2042.36	54	940	FH							
FE	IX	2498.6	2497.8	M	940	FH	GA	II	2885.67	2884.83	1		652
FE	IX	3167.9	3167.0		806	H	GA	II	2887.30	2886.45	1		652
FE	IX	3534.6	3533.6		806	H	GA	II	2894.50	2893.65	F		652
							GA	II	2911.62	2910.77	30		652
							GA	II	2970.28	2969.41	50		652
FE	XI	2169.71	2169.03	43	914	FH							
FE	XI	2320.6	2319.9		726	F							
FE	XI	2649.52	2648.73	255	940	FH	GA	II	2971.88	2971.01	10		652
							GA	II	2972.47	2971.60	50		652
FE	XII	2169.71	2169.03	74	940	FH	GA	II	2975.64	2974.77	120		652
FE	XII	2406.44	2405.71	216	940	FH	GA	II	2993.71	2992.84	10		652
FE	XII	2566.76	2565.99	78	940	FH	GA	II	3012.78	3011.90	30		652
FE	XII	2905.0	2904.1		726	FH							
FE	XII	3072.9	3072.0		726	FH							
							GA	II	3159.09	3158.18	10		652
							GA	II	3375.91	3374.94	85		652
FE	XIII	2301.8	2301.1		726	F	GA	II	3376.92	3375.95	1		652
FE	XIII	2579.54	2578.77	216	940	FH							
FE	XIII	3389.2	3388.2		726	F							

[illegible]

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
GE	II	2760.224	2759.409	10		676		GE	III	2019.88	2019.22	2		406	
GE	II	2771.406	2770.588	50		676		GE	III	2022.89	2022.25	4		406	
GE	II	2773.165	2772.346	75		676		GE	III	2062.80	2062.14	3		406	
GE	II	2786.322	2785.500	2		676		GE	III	2100.72	2100.05	15		406	
GE	II	2806.50	2805.66	20	15.	676		GE	III	2103.09	2102.42	15		406	
GE	II	2811.396	2810.568	2		676		GE	III	2103.81	2103.19	2		406	
GE	II	2814.929	2814.100	10		676		GE	III	2105.12	2104.45	25		406	
GE	II	2825.339	2824.508	20		676		GE	III	2107.78	2107.11	1		406	
GE	II	2832.6763	2831.8432	1000	12.	676		GE	III	2139.33	2138.65	1		406	
GE	II	2835.113	2834.279	50	15.	676		GE	III	2199.63	2198.94	1000		402	
GE	II	2840.514	2839.679	75	19.	676		GE	III	2923.71	2922.86	3		406	
GE	II	2846.311	2845.475	5	12.	676		GE	III	3198.49	3197.56	25		406	
GE	II	2846.3637	2845.5273	1000	12.	676		GE	III	3212.79	3211.86	35		406	
GE	II	2854.808	2853.970	75	19.	676		GE	III	3215.88	3214.95	25		406	
GE	II	2862.2	2861.4	5		676		GE	III	3256.00	3255.05	40		406	
GE	II	2891.30	2890.45	10		676		GE	III	3260.83	3259.90	20		406	
GE	II	2946.6	2945.7	5		676		GE	III	3264.12	3263.18	3		406	
GE	II	2995.38	2994.51	2		676		GE	III	3370.53	3369.57	5		406	
GE	II	2995.84	2994.97	10		676		GE	III	3415.24	3414.27	20		406	
GE	II	3048.12	3047.23	2		676		GE	III	3435.06	3434.03	40		406	
GE	II	3049.19	3048.30	10		676		GE	IV	2293.7	2293.0	2		406	
GE	II	3061.45	3060.56	20		676		GE	IV	2344.09	2343.37	2		406	
GE	II	3085.871	3084.975	20		676		GE	IV	2446.12	2445.38	15		406	
GE	II	3182.41	3181.49	5		676		GE	IV	2446.45	2445.71	15		406	
GE	II	3187.637	3186.715	50		676		GE	IV	2489.00	2488.25	30		406	
GE	II	3215.21	3214.28	2		676		GE	IV	2543.20	2542.44	20		406	
GE	II	3217.40	3216.47	2		676		GE	IV	2548.41	2547.64	2		406	
GE	II	3222.570	3221.640	100		676		GE	IV	2632.56	2631.78	5		406	
GE	II	3224.605	3223.674	5		676		GE	IV	2698.88	2698.08	3		406	
GE	II	3276.960	3276.016	2		676		GE	IV	2718.24	2717.44	15		406	
GE	II	3281.782	3280.837	2		676		GE	IV	2736.90	2736.09	30		406	
GE	II	3305.292	3304.341	10		676		GE	IV	2789.35	2788.61	30		406	
GE	II	3313.516	3312.563	50		676		GE	IV	3072.73	3071.84	5		406	
GE	II	3324.606	3323.644	75		676		HE	I	2280.	2279.	0		126	
GE	II	3370.587	3369.620	20		676		HE	I	2320.	2319.	1		126	
GE	II	3390.755	3389.782	40		676		HE	I	2364.6	2363.9	6		126	
GE	II	3456.705	3455.716	100		676		HE	I	2403.	2402.	2		126	
GE	II	3500.212	3499.211	300		676		HE	I	2492.	2491.	3		126	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
HE	I	2562.	2561.	12		126		HE	I	3259.214	3258.275	5		497	
HE	I	2578.4	2577.6	120		126		HE	I	3297.722	3296.773	7		497	
HE	I	2615.964	2615.184	M		497		HE	I	3355.514	3354.550	10		497	
HE	I	2617.492	2616.711	M		497		HE	I	3373.	3372.	3		126	
HE	I	2619.259	2618.478	M		497		HE	I	3448.574	3447.586	15		497	
HE	I	2621.316	2620.534	M		497		HE	I	3471.	3470.	2		126	
HE	I	2623.730	2622.947	M		497		HE	II	2136.024	2135.350			309	
HE	I	2626.589	2625.806	M		497		HE	II	2149.274	2148.598			309	
HE	I	2630.013	2629.229	M		497		HE	II	2165.928	2165.248			309	
HE	I	2634.160	2633.375	M		497		HE	II	2187.288	2186.604			309	
HE	I	2639.248	2638.462	M		497		HE	II	2215.361	2214.671			309	
HE	I	2645.589	2644.802	2		497		HE	II	2253.387	2252.689			309	
HE	I	2653.638	2652.848	3		497		HE	II	2306.905	2306.195			309	
HE	I	2664.063	2663.271	4		497		HE	II	2386.131	2385.404			309	
HE	I	2677.930	2677.135	5		497		HE	II	2511.961	2511.205			309	
HE	I	2696.919	2696.119	7		497		HE	II	2734.106	2733.297			309	
HE	I	2723.998	2723.191	10		497		HE	II	3204.027	3203.102		1.	309	
HE	I	2764.620	2763.804	20		497		K	I	2943.520	2942.661	4	6.	488	
HE	I	2819.0	2818.2	20		126		K	I	2943.572	2942.713	4	6.	488	
HE	I	2829.908	2829.076	40	12.	497		K	I	2961.067	2960.203	4	5.	488	
HE	I	2886.	2885.	2		126		K	I	2964.142	2963.277	4	5.	488	
HE	I	2945.967	2945.106	100	11.	497		K	I	2992.991	2992.118	10	4.	1019	
HE	I	3014.6	3013.7	100		126		K	I	2993.095	2992.223	10	4.	1019	
HE	I	3148.690	3147.779	M		497		K	I	3035.644	3034.761	40	3.	1019	
HE	I	3151.625	3150.713	M		497		K	I	3035.803	3034.920	40	3.	1019	
HE	I	3155.069	3154.156	M		497		K	I	3102.690	3101.790	40	2.	1019	
HE	I	3159.148	3158.234	M		497		K	I	3102.943	3102.043	25	2.	1019	
HE	I	3164.029	3163.114	M		497		K	I	3218.084	3217.155	120	1.	1019	
HE	I	3169.938	3169.021	M		497		K	I	3218.550	3217.621	90	1.	1019	
HE	I	3177.186	3176.267	M		497		K	I	3447.359	3446.372	300	4.	1019	
HE	I	3186.215	3185.293	M		497		K	I	3448.363	3447.375	250	4.	1019	
HE	I	3188.667	3187.745	200	3.	497		K	II	2343.02	2342.30	40		488	N
HE	I	3197.666	3196.742	2		497		K	II	2505.35	2504.60	40	5.	488	
HE	I	3212.496	3211.568	2		497		K	II	2744.36	2743.55	70	6.	488	
HE	I	3232.199	3231.266	3		497		K	II	2778.71	2777.89	20	4.	488	
						497		K	II	2809.82	2808.99	40	7.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
KR	II	2099.599	2098.934	10		509		KR	II	2200.855	2200.169	10		509	
KR	II	2099.678	2099.013	25		509		KR	II	2201.095	2200.409	1		509	
KR	II	2100.068	2099.403	4		509		KR	II	2201.753	2201.067	25		509	
KR	II	2107.025	2106.358	10		509		KR	II	2203.077	2202.390	25		509	
KR	II	2110.456	2109.788	60		509		KR	II	2207.050	2206.362	10		509	
KR	II	2110.549	2109.881	25		509		KR	II	2207.838	2207.150	1		509	
KR	II	2113.850	2113.181	25		509		KR	II	2209.092	2208.405	10		509	
KR	II	2115.245	2114.577	10		509		KR	II	2212.407	2211.719	60		509	
KR	II	2115.922	2115.254	4		509		KR	II	2213.651	2212.963	60		509	
KR	II	2115.996	2115.328	4		509		KR	II	2214.775	2214.087	1		509	
KR	II	2118.908	2118.239	40		509		KR	II	2216.566	2215.877	4		509	
KR	II	2119.484	2118.815	200		509		KR	II	2222.525	2221.834	4		509	
KR	II	2120.527	2119.858	10		509		KR	II	2225.879	2225.187	25		509	
KR	II	2121.536	2120.867	10		509		KR	II	2226.667	2225.975	1		509	
KR	II	2125.714	2125.043	4		509		KR	II	2228.618	2227.925	120		509	
KR	II	2126.441	2125.770	25		509		KR	II	2229.791	2229.082	1		509	
KR	II	2130.492	2129.820	40		509		KR	II	2230.044	2229.353	1		509	
KR	II	2131.105	2130.432	120		509		KR	II	2235.087	2234.394	40		509	
KR	II	2131.610	2130.937	4		509		KR	II	2240.630	2239.936	1		509	
KR	II	2132.871	2132.200	4		509		KR	II	2253.569	2252.873	1		509	
KR	II	2134.516	2133.844	40		509		KR	II	2261.450	2260.751	10		509	
KR	II	2135.366	2134.694	25		509		KR	II	2264.376	2263.677	40		509	
KR	II	2140.864	2140.190	60		509		KR	II	2272.594	2271.892	4		509	
KR	II	2144.520	2143.845	40		509		KR	II	2273.294	2272.592	10		509	
KR	II	2145.739	2145.064	150		509		KR	II	2273.930	2273.228	90		509	
KR	II	2146.717	2146.042	1		509		KR	II	2275.407	2274.706	1		509	
KR	II	2151.385	2150.710	10		509		KR	II	2275.553	2274.852	25		509	
KR	II	2165.791	2165.112	4		509		KR	II	2278.126	2277.424	40		509	
KR	II	2169.742	2169.064	4		509		KR	II	2278.430	2277.728	4		509	
KR	II	2178.454	2177.773	60		509		KR	II	2281.251	2280.549	40		509	
KR	II	2178.766	2178.085	1		509		KR	II	2283.385	2282.682	1		509	
KR	II	2182.828	2182.145	4		509		KR	II	2291.161	2290.455	25		509	
KR	II	2186.910	2186.226	1		509		KR	II	2291.256	2290.550	1		509	
KR	II	2187.375	2186.691	25		509		KR	II	2301.086	2300.380	90		509	
KR	II	2187.606	2186.922	4		509		KR	II	2302.444	2301.737	90		509	
KR	II	2192.783	2192.099	60		509		KR	II	2305.648	2304.940	10		509	
KR	II	2193.026	2192.342	25		509		KR	II	2312.728	2312.018	150		509	
KR	II	2193.111	2192.427	1		509		KR	II	2314.954	2314.243	120		509	
KR	II	2195.601	2194.917	1		509		KR	II	2315.363	2314.652	25		509	
KR	II	2198.180	2197.495	90		509		KR	II	2316.245	2315.534	150		509	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
KR	II	2317.033	2316.322	200		509		KR	II	2437.197	2436.458	90		509	
KR	II	2321.557	2320.844	60		509		KR	II	2443.702	2442.963	1		509	
KR	II	2324.772	2324.061	4		509		KR	II	2447.216	2446.476	250		509	
KR	II	2325.333	2324.621	25		509		KR	II	2447.655	2446.915	25		509	
KR	II	2325.636	2324.924	10		509		KR	II	2465.52	2464.77	100	9.	488	
KR	II	2332.814	2332.100	4		509		KR	II	2833.83	2833.00	100	10.	488	
KR	II	2340.661	2339.945	25		509		LI	I	2395.114	2394.386	3	5.	488	
KR	II	2345.102	2344.384	150		509		LI	I	2426.162	2425.426	15	4.	488	
KR	II	2353.592	2352.874	120		509		LI	I	2475.807	2475.061	25	3.	488	
KR	II	2354.418	2353.700	250		509		LI	I	2563.079	2562.312	40	2.	488	
KR	II	2363.473	2362.752	150		509		LI	I	2742.014	2741.204	160	1.	488	
KR	II	2365.362	2364.640	1		509		LI	II	2249.908	2249.211	I		307	
KR	II	2366.393	2365.677	200		509		LI	II	2287.527	2286.822	I		307	
KR	II	2366.872	2366.150	40		509		LI	II	2303.277	2302.568	I		307	
KR	II	2369.696	2368.973	90		509		LI	II	2304.039	2303.330	I		307	
KR	II	2370.463	2369.740	40		509		LI	II	2330.551	2329.836	I		307	
KR	II	2373.821	2373.097	10		509		LI	II	2337.591	2336.875	60		307	
KR	II	2374.419	2373.695	120		509		LI	II	2337.626	2336.910	100		307	
KR	II	2376.254	2375.529	250		509		LI	II	2337.713	2336.997	40		307	
KR	II	2386.572	2385.846	10		509		LI	II	2382.264	2381.538	I		307	
KR	II	2387.393	2386.667	1		509		LI	II	2383.926	2383.199	I		307	
KR	II	2390.153	2389.426	25		509		LI	II	2403.062	2402.331	I		307	
KR	II	2391.255	2390.528	90		509		LI	II	2411.575	2410.842	I		307	
KR	II	2393.518	2392.790	200		509		LI	II	2430.511	2429.814	I		307	
KR	II	2401.553	2400.823	25		509		LI	II	2507.695	2506.940	I		307	
KR	II	2408.325	2407.595	60		509		LI	II	2509.541	2508.785	I		307	
KR	II	2409.800	2409.069	150		509		LI	II	2540.250	2539.487	I		307	
KR	II	2411.295	2410.564	10		509		LI	II	2605.859	2605.081	I		307	
KR	II	2415.672	2414.940	250		509		LI	II	2658.084	2657.293	40		307	
KR	II	2417.531	2416.798	120		509		LI	II	2658.094	2657.303	60		307	
KR	II	2418.959	2418.226	60		509		LI	II	2675.255	2674.460	40	4.	307	
KR	II	2419.132	2418.399	150		509		LI	II	2729.047	2728.239	0		307	
KR	II	2421.068	2420.334	4		509		LI	II	2729.096	2728.288	100		307	
KR	II	2423.452	2422.717	10		509		LI	II	2729.123	2728.315	40		307	
KR	II	2425.800	2425.065	90		509		LI	II	2731.281	2730.473	60		307	
KR	II	2427.100	2426.364	250		509		LI	II	2731.359	2730.551	20		307	
KR	II	2429.070	2428.334	250		509									
KR	II	2430.256	2429.519	1		509									
KR	II	2430.768	2430.031	10		509									
KR	II	2434.150	2433.412	1		509									

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
LI	II	2767.806	2766.989	I		307		LI	II	3250.805	3249.868	I		307	
LI	II	2791.136	2790.313	I		307		LI	II	3307.236	3306.284	I		307	
LI	II	2934.880	2934.022	40		307									
LI	II	2934.924	2934.066	40		307		LI	III	2018.890	2018.239			309	
LI	II	2934.973	2934.115	100		307		LI	III	2082.917	2082.254			309	
								LI	III	2160.129	2159.451			309	
LI	II	2935.109	2934.251	20		307		LI	III	2405.597	2404.865			309	
LI	II	3030.003	3029.121	60		307		LI	III	2847.859	2847.022			309	
LI	II	3030.018	3029.136	60		307									
LI	II	3156.222	3155.308	60		307		LI	III	2901.521	2900.672			309	
LI	II	3156.244	3155.330	80		307		LI	III	2916.170	2915.316			309	
								LI	III	2970.914	2970.046			309	
LI	II	3197.187	3196.264	20		307		LI	III	3063.242	3062.352			309	
LI	II	3197.254	3196.330	180		307		LI	III	3190.656	3189.733			309	
LI	II	3197.279	3196.356	80		307									
LI	II	3200.257	3199.332	100		307		LI	III	3375.238	3374.269			309	
LI	II	3200.359	3199.434	40		307									
								MG	I	2026.477	2025.824	35	2.	1017	
								MG	I	2547.97	2547.21			708	P
								MG	I	2549.27	2548.51			708	P
								MG	I	2551.92	2551.16			708	P
								MG	I	2554.021	2553.256			708	P
								MG	I	2555.330	2554.565			708	P
								MG	I	2557.32	2556.55			708	P
								MG	I	2557.993	2557.226	1	.	1017	
								MG	I	2558.63	2557.86			708	P
								MG	I	2561.30	2560.53			708	P
								MG	I	2561.709	2560.941	1	.	1017	
								MG	I	2563.027	2562.259	2	.	1017	
								MG	I	2565.766	2564.937	2	.	1017	
								MG	I	2565.96	2565.19			708	P
								MG	I	2567.28	2566.51			708	P
								MG	I	2569.97	2569.20			708	P
								MG	I	2571.678	2570.908	1	.	1017	
								MG	I	2573.018	2572.248	2	.	1017	
								MG	I	2575.716	2574.945	3	.	1017	
								MG	I	2577.314	2576.545			708	P
								MG	I	2578.660	2577.888	1	.	1017	
								MG	I	2581.359	2580.587	2	.	1017	
								MG	I	2584.989	2584.216	2	.	1017	
								MG	I	2586.332	2585.558	3	.	1017	
								MG	I	2589.059	2588.285	5	.	1017	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
MG	I	2592.666	2591.891	1	.	1017		MG	I	2668.917	2668.124	15	11.	1017	
MG	I	2594.006	2593.231	2	.	1017		MG	I	2670.347	2669.553	25	11.	1017	
MG	I	2596.749	2595.973	3	.	1017		MG	I	2673.254	2672.460	40	11.	1017	
MG	I	2603.272	2602.495	3	.	1017		MG	I	2690.34	2689.50	I	.	1017	
MG	I	2604.632	2603.854	7	.	1017		MG	I	2693.31	2692.45	I	.	1017	
MG	I	2607.399	2606.621	10	.	1017		MG	I	2694.522	2693.723	5	10.	1017	
MG	I	2614.137	2613.357	2	14.	1017		MG	I	2695.981	2695.181	10	10.	1017	
MG	I	2615.507	2614.726	3	14.	1017		MG	I	2698.945	2698.145	15	10.	1017	
MG	I	2618.294	2617.513	5	14.	1017		MG	I	2732.802	2731.993	25	9.	1017	
MG	I	2629.448	2628.664	5	13.	1017		MG	I	2734.302	2733.493	40	9.	1017	
MG	I	2630.837	2630.053	15	13.	1017		MG	I	2737.352	2736.542	60	9.	1017	
MG	I	2633.658	2632.873	25	13.	1017		MG	I	2766.039	2765.222	10	8.	1017	
MG	I	2645.589	2644.801	3	12.	1017		MG	I	2769.156	2768.339	20	8.	1017	
MG	I	2646.994	2646.206	5	12.	1017		MG	I	2777.47	2776.59	I	.	1017	
MG	I	2649.851	2649.062	7	12.	1017		MG	I	2777.509	2776.690	130	6.	1017	
								MG	I	2779.01	2778.13	I	7.	1017	
								MG	I	2779.090	2778.270	130	6.	1017	
								MG	I	2780.651	2779.831	160	6.	1017	
								MG	I	2782.109	2781.288	25	7.	1017	
								MG	I	2782.236	2781.416	130	6.	1017	
								MG	I	2783.793	2782.972	130	6.	1017	
								MG	I	2810.588	2809.761	5	.	1017	
								MG	I	2811.940	2811.112	3	.	1017	
								MG	I	2812.609	2811.781	2	.	1017	
								MG	I	2847.552	2846.716	60	5.	1017	
								MG	I	2849.179	2848.342	80	5.	1017	
								MG	I	2852.498	2851.660	100	5.	1017	
								MG	I	2852.965	2852.127	1000	1.	1017	
								MG	I	2903.773	2902.923	3	4.	1017	
								MG	I	2907.212	2906.360	7	4.	1017	
								MG	I	2916.306	2915.453	5	15.	1017	
								MG	I	2937.598	2936.739	40	3.	1017	
								MG	I	2939.332	2938.473	60	3.	1017	
								MG	I	2942.855	2941.995	70	3.	1017	
								MG	I	3091.962	3091.065	160	5.	1017	
								MG	I	3093.882	3092.984	195	5.	1017	
								MG	I	3097.789	3096.890	230	5.	1017	
								MG	I	3198.550	3197.625	3	.	1017	
								MG	I	3202.721	3201.796	5	.	1017	
								MG	I	3330.877	3329.919	115	4.	1017	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	2292.897	2292.189	30		148		MN	I	2398.463	2397.732	2		148	
MN	I	2293.830	2293.122	2		148		MN	I	2402.562	2401.830	2		148	
MN	I	2297.589	2296.880	5		148		MN	I	2404.480	2403.748	2		148	
MN	I	2299.585	2298.876	20		148		MN	I	2405.615	2404.882	5		148	
MN	I	2301.010	2300.300	8		148		MN	I	2406.006	2405.274	3		148	
MN	I	2301.438	2300.728	3		148		MN	I	2406.361	2405.628	2		148	
MN	I	2301.969	2301.260	1		148		MN	I	2406.749	2406.017	2		148	
MN	I	2302.458	2301.748	4		148		MN	I	2409.931	2409.198	2		148	
MN	I	2306.229	2305.518	5		148		MN	I	2412.149	2411.415	2		148	
MN	I	2306.414	2305.703	15		148		MN	I	2418.237	2417.502	2		148	
MN	I	2309.769	2309.057	2		148		MN	I	2418.644	2417.909	2		148	
MN	I	2310.085	2309.374	10		148		MN	I	2418.777	2418.042	4		148	
MN	I	2313.016	2312.304	20		148		MN	I	2420.846	2420.110	30	34.	148	
MN	I	2318.88	2318.17	1		148		MN	I	2421.139	2420.403	30	33.	148	
MN	I	2319.215	2318.501	2		148		MN	I	2421.989	2421.254	20	34.	148	
MN	I	2322.710	2321.995	10		148		MN	I	2423.835	2423.099	6	34.	148	
MN	I	2322.820	2322.106	3		148		MN	I	2424.997	2424.260	30	34.	148	
MN	I	2324.462	2323.748	30		148		MN	I	2425.122	2424.385	1	34.	148	
MN	I	2325.518	2324.803	5		148		MN	I	2429.023	2428.286	8	34.	148	
MN	I	2328.024	2327.308	2		148		MN	I	2429.160	2428.423	25	34.	148	
MN	I	2342.806	2342.088	3		148		MN	I	2429.324	2428.586	2		148	
MN	I	2343.190	2342.471	1		148		MN	I	2429.971	2429.233	30	33.	148	
MN	I	2346.846	2346.126	1		148		MN	I	2431.133	2430.395	35	33.	148	
MN	I	2347.103	2346.383	2		148		MN	I	2432.258	2431.520	40	34.	148	
MN	I	2347.217	2346.497	5	35	148		MN	I	2432.325	2431.587	4		148	
MN	I	2349.983	2349.263	3		148		MN	I	2432.653	2431.915	10	34.	148	
MN	I	2351.072	2350.352	10	35.	148		MN	I	2433.098	2432.360	8		148	
MN	I	2353.658	2352.937	20	35.	148		MN	I	2433.637	2432.898	7	33.	148	
MN	I	2354.741	2354.020	4		148		MN	I	2434.810	2434.071	30	33.	148	
MN	I	2358.566	2357.899	2		148		MN	I	2434.947	2434.208	35	33.	148	
MN	I	2363.442	2362.719	1		148		MN	I	2435.876	2435.137	40	33.	148	
MN	I	2364.546	2363.823	4		148		MN	I	2436.115	2435.376	5	33.	148	
MN	I	2364.679	2363.956	1		148		MN	I	2436.250	2435.511	20	33.	148	
MN	I	2367.299	2366.575	1		148		MN	I	2441.157	2440.415	2		148	
MN	I	2367.468	2366.744	5		148		MN	I	2446.900	2446.159	1		148	
MN	I	2368.575	2367.851	1		148		MN	I	2447.303	2446.561	2		148	
MN	I	2372.842	2372.116	10	2.	148		MN	I	2447.352	2446.610	2		148	
MN	I	2377.909	2377.183	30	2.	148		MN	I	2449.790	2449.047	2		148	
MN	I	2382.902	2382.175	2		148		MN	I	2454.613	2453.870	6		148	
MN	I	2384.777	2384.049	40	2.	148		MN	I	2455.005	2454.262	6		148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	2457.622	2456.878	3		148		MN	I	2523.033	2522.274	4	30.	148	
MN	I	2459.056	2458.312	2		148		MN	I	2525.231	2524.472	10	30.	148	
MN	I	2460.439	2459.694	50		148		MN	I	2526.428	2525.669	8		148	
MN	I	2461.632	2460.887	40	32.	148		MN	I	2528.944	2528.184	2		148	
MN	I	2461.756	2461.011	50	32.	148		MN	I	2529.460	2528.700	8	30.	148	
MN	I	2462.935	2462.190	7	32.	148		MN	I	2533.811	2533.050	20	30.	148	
MN	I	2463.341	2462.596	3	32.	148		MN	I	2534.657	2533.896	2		148	
MN	I	2463.521	2462.776	20	32.	148		MN	I	2537.640	2536.878	5		148	
MN	I	2463.608	2462.863	5	32.	148		MN	I	2540.404	2539.642	9	29.	148	
MN	I	2463.750	2463.005	40	32.	148		MN	I	2540.555	2539.792	5	29.	140	
MN	I	2463.927	2463.182	6	32.	148		MN	I	2543.254	2542.491	10	29.	148	
MN	I	2468.954	2468.207	2	31.	148		MN	I	2544.356	2543.593	2		148	
MN	I	2470.154	2469.407	40	31.	148		MN	I	2544.527	2543.763	4	29.	148	
MN	I	2471.077	2470.330	4		148		MN	I	2547.346	2546.582	4		148	
MN	I	2479.552	2478.803	2		148		MN	I	2549.56	2548.80	3		148	
MN	I	2482.180	2481.431	1		148		MN	I	2557.806	2557.040	3		148	
MN	I	2484.493	2483.743	8		148		MN	I	2566.721	2565.952	4		148	
MN	I	2485.864	2485.114	10		148		MN	I	2566.999	2566.230	1		148	
MN	I	2486.592	2485.842	5		148		MN	I	2567.552	2566.783	2		148	
MN	I	2492.165	2491.414	2		148		MN	I	2568.17	2567.40	1		148	
MN	I	2495.143	2494.391	20	16.	148		MN	I	2573.526	2572.755	50	12.	148	
MN	I	2495.337	2494.585	5		148		MN	I	2576.280	2575.509	20	12.	148	
MN	I	2496.801	2496.048	7		148		MN	I	2578.241	2577.470	6		148	
MN	I	2497.168	2496.415	3		148		MN	I	2579.130	2578.358	2		148	
MN	I	2497.837	2497.084	4		148		MN	I	2579.319	2578.548	2		148	
MN	I	2498.350	2497.597	4		148		MN	I	2579.466	2578.695	2		148	
MN	I	2498.478	2497.725	15		148		MN	I	2579.95	2579.18	1		148	
MN	I	2500.183	2499.429	8		148		MN	I	2580.440	2579.670	15		488	
MN	I	2501.446	2500.692	4		148		MN	I	2580.952	2580.180	3		148	
MN	I	2501.594	2500.840	2		148		MN	I	2581.955	2581.183	2		148	
MN	I	2508.511	2507.756	2		148		MN	I	2582.250	2581.478	3		148	
MN	I	2512.108	2511.351	2		148		MN	I	2583.042	2582.270	5		148	
MN	I	2512.294	2511.538	4		148		MN	I	2584.047	2583.275	7		148	
MN	I	2513.842	2513.086	1		148		MN	I	2584.873	2584.100	10	12.	148	
MN	I	2515.071	2514.314	40		148		MN	I	2585.075	2584.302	100	12.	148	
MN	I	2518.337	2517.580	2		148		MN	I	2585.313	2584.540	2		148	
MN	I	2518.434	2517.677	1		148		MN	I	2587.873	2587.100	1		148	
MN	I	2518.717	2517.960	1		148		MN	I	2593.073	2592.298	6		148	
MN	I	2522.744	2521.986	7	30.	148		MN	I	2593.719	2592.944	60	12.	148	
MN	I	2522.943	2522.185	2		148		MN	I	2596.539	2595.763	80	12.	148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
MN	I	2598.498	2597.722	2		148		MN	I	2645.955	2645.168	1		148	
MN	I	2598.948	2598.172	6		148		MN	I	2649.588	2648.800	3		148	
MN	I	2600.997	2600.220	8		148		MN	I	2655.813	2654.824	1		148	
MN	I	2601.428	2600.650	6		148		MN	I	2656.577	2655.787	10	15.	148	
MN	I	2602.263	2601.486	2		148		MN	I	2658.318	2657.528	1		148	
MN	I	2604.264	2603.487	1		148		MN	I	2658.688	2657.898	8		148	
MN	I	2606.915	2606.137	1		148		MN	I	2659.139	2658.349	2	15.	148	
MN	I	2613.012	2612.233	5		148		MN	I	2661.96	2661.20	2		148	
MN	I	2613.639	2612.860	20	28.	148		MN	I	2665.856	2665.064	4		148	
MN	I	2613.785	2613.008	1		148		MN	I	2668.055	2667.263	1		148	
MN	I	2615.329	2614.550	3		148		MN	I	2668.543	2667.751	1		148	
MN	I	2616.630	2615.850	5		148		MN	I	2668.674	2667.882	1		148	
MN	I	2617.080	2616.300	4		148		MN	I	2669.162	2668.370	3		148	
MN	I	2618.345	2617.564	1	27.	148		MN	I	2671.030	2670.237	4		148	
MN	I	2619.251	2618.470	4	27.	148		MN	I	2671.228	2670.435	4		148	
MN	I	2619.692	2618.911	20	27.	148		MN	I	2673.64	2672.85	1		148	
MN	I	2620.291	2619.510	25	28.	148		MN	I	2674.444	2673.651	1		148	
MN	I	2620.600	2619.819	5		148		MN	I	2676.884	2676.090	3		148	
MN	I	2620.761	2619.980	10	27.	148		MN	I	2677.120	2676.326	10	15.	148	
MN	I	2623.677	2622.895	25	27.	148		MN	I	2682.518	2681.723	20		488	N
MN	I	2624.066	2623.284	8	24.	148		MN	I	2683.040	2682.244	2	15.	148	
MN	I	2624.144	2623.362	5	27.	148		MN	I	2683.010	2683.014	15		488	N
MN	I	2624.827	2624.043	50	27.	148		MN	I	2686.738	2685.941	8	23.	148	
MN	I	2625.249	2624.466	1		148		MN	I	2687.574	2686.777	6		148	
MN	I	2625.424	2624.642	2	24.	148		MN	I	2688.197	2687.400	8	23.	148	
MN	I	2625.582	2624.800	10	24.	148		MN	I	2688.875	2688.078	2		148	
MN	I	2625.902	2625.120	3	26.	148		MN	I	2691.775	2690.977	2		148	
MN	I	2627.417	2626.635	20	26.	148		MN	I	2693.453	2692.655	20	23.	148	
MN	I	2628.26	2627.48	1		148		MN	I	2694.755	2693.957	2	23.	148	
MN	I	2628.773	2627.990	2		148		MN	I	2695.358	2694.560	8	15.	148	
MN	I	2628.883	2628.100	2		148		MN	I	2699.689	2698.890	2	15.	148	
MN	I	2631.043	2630.260	8	25.	148		MN	I	2703.930	2703.129	20		148	
MN	I	2631.348	2630.565	25	24.	148		MN	I	2704.460	2703.658	50		148	
MN	I	2631.504	2630.721	2	25.	148		MN	I	2704.72	2703.92	40	11.	148	
MN	I	2636.337	2635.551	4		148		MN	I	2706.943	2706.142	5	15.	148	
MN	I	2636.916	2636.131	2		148		MN	I	2714.123	2713.320	100	11.	148	
MN	I	2641.129	2640.340	1		148		MN	I	2717.831	2717.028	4		148	
MN	I	2641.405	2640.619	4	25.	148		MN	I	2721.191	2720.387	2		148	
MN	I	2641.671	2640.887	1		148		MN	I	2721.354	2720.550	5		148	
MN	I	2643.190	2642.403	3		148		MN	I	2726.94	2726.13	100	11.	148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	2728.188	2727.381	1		148		MN	I	2762.611	2761.797	3		148	
MN	I	2730.226	2729.420	10	40.	148		MN	I	2762.800	2761.985	2		148	
MN	I	2733.067	2732.260	2		148		MN	I	2763.668	2762.853	3		148	
MN	I	2733.975	2733.167	1		148		MN	I	2764.480	2763.665	3		148	
MN	I	2734.972	2734.164	1		148		MN	I	2764.69	2763.87	3		148	
MN	I	2735.105	2734.297	1	40.	148		MN	I	2764.722	2763.907	8		148	
MN	I	2735.544	2734.736	15	39.	148		MN	I	2764.841	2764.027	1		148	
MN	I	2735.805	2734.997	4		148		MN	I	2768.266	2767.450	10		148	
MN	I	2736.118	2735.310	1		148		MN	I	2770.227	2769.410	2		148	
MN	I	2738.448	2737.640	2		148		MN	I	2771.058	2770.242	3		148	
MN	I	2739.361	2738.552	5		148		MN	I	2772.246	2771.430	30	8.	148	
MN	I	2739.670	2738.861	25	38.	148		MN	I	2772.849	2772.032	2	13.	148	
MN	I	2740.436	2739.627	4		148		MN	I	2773.838	2773.021	5	14.	148	
MN	I	2740.970	2740.161	1	38.	148		MN	I	2774.476	2773.659	10	14.	148	
MN	I	2741.355	2740.546	3		148		MN	I	2775.106	2774.289	1		148	
MN	I	2743.545	2742.735	15		148		MN	I	2777.036	2776.218	80	9.	148	
MN	I	2743.740	2742.930	1		148		MN	I	2778.282	2777.464	6		148	
MN	I	2744.256	2743.446	10		148		MN	I	2779.363	2778.544	60	9.	148	
MN	I	2744.600	2743.790	5		148		MN	I	2780.812	2779.993	40	13.	148	
MN	I	2744.834	2744.023	9	38.	148		MN	I	2782.552	2781.733	1		148	
MN	I	2745.078	2744.268	6	38.	148		MN	I	2783.078	2782.259	1		148	
MN	I	2745.329	2744.519	6		148		MN	I	2783.530	2782.711	50	7.	148	
MN	I	2745.559	2744.748	1		148		MN	I	2783.899	2783.080	10		148	
MN	I	2745.893	2745.082	3	38.	148		MN	I	2786.154	2785.334	1		148	
MN	I	2746.359	2745.549	10	38.	148		MN	I	2787.005	2786.185	3	14.	148	
MN	I	2746.724	2745.913	2		148		MN	I	2787.086	2786.266	3		148	
MN	I	2748.596	2747.785	4		148		MN	I	2788.064	2787.264	2	13.	148	
MN	I	2750.016	2749.205	20	38.	148		MN	I	2788.633	2787.813	15	9.	148	
MN	I	2751.414	2750.602	3		148		MN	I	2789.503	2788.682	3		148	
MN	I	2753.071	2752.259	3		148		MN	I	2790.013	2789.192	25	8.	148	
MN	I	2753.134	2752.322	7		148		MN	I	2790.176	2789.355	15	9.	148	
MN	I	2753.448	2752.635	3		148		MN	I	2790.552	2789.731	3		148	
MN	I	2754.664	2753.851	3		148		MN	I	2791.175	2790.353	30	8.	148	
MN	I	2754.807	2753.995	3		148		MN	I	2791.747	2790.925	4		148	
MN	I	2756.590	2755.777	2		148		MN	I	2791.906	2791.085	20	6.	148	
MN	I	2756.653	2755.839	2		148		MN	I	2792.405	2791.584	4	13.	148	
MN	I	2757.081	2756.267	4		148		MN	I	2792.529	2791.707	2	9.	148	
MN	I	2759.764	2758.950	4		148		MN	I	2794.06	2793.24	6	14.	148	
MN	I	2761.734	2760.920	100	9.	148		MN	I	2795.640	2794.817	1000	1.	148	
MN	I	2762.164	2761.350	4		148		MN	I	2797.760	2796.938	5	9.	148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	I	2797.817	2797.094	3	13.	148		MN	I	2823.104	2822.275	2		148	
MN	I	2799.093	2798.270	880	1.	148		MN	I	2823.378	2822.549	30	6.	148	
MN	I	2800.665	2799.841	50	6.	148		MN	I	2824.097	2823.268	5	7.	148	
MN	I	2801.45	2800.63	6	7.	148		MN	I	2824.643	2823.813	1		148	
MN	I	2801.908	2801.084	770	1.	148		MN	I	2826.387	2825.552	2		148	
MN	I	2802.992	2802.168	10	21.	148		MN	I	2829.592	2828.762	6	7.	148	
MN	I	2803.223	2802.399	5	22.	148		MN	I	2831.624	2830.793	20	6.	148	
MN	I	2803.279	2802.454	10	8.	148		MN	I	2834.003	2833.171	3		148	
MN	I	2803.443	2802.619	3	21.	148		MN	I	2837.142	2836.310	20	6.	148	
MN	I	2803.521	2802.697	2	21.	148		MN	I	2837.730	2836.898	4		148	
MN	I	2803.629	2802.805	15	21.	148		MN	I	2840.830	2839.997	15	5.	148	
MN	I	2804.447	2803.623	10	8.	148		MN	I	2841.817	2840.983	1		148	
MN	I	2804.711	2803.946	2	22.	148		MN	I	2845.600	2844.764	2		148	
MN	I	2804.920	2804.095	20	8.	148		MN	I	2859.493	2858.655	30	5.	148	
MN	I	2805.051	2804.216	2		148		MN	I	2864.665	2863.827	2		148	
MN	I	2805.188	2804.363	15	21.	148		MN	I	2867.485	2866.646	2		148	
MN	I	2805.753	2804.929	6	13.	148		MN	I	2869.720	2868.880	7	5.	148	
MN	I	2806.961	2806.136	30	21.	148		MN	I	2871.305	2870.464	1		148	
MN	I	2807.619	2806.794	10	22.	148		MN	I	2872.426	2871.583	1		148	
MN	I	2807.803	2806.977	4	22.	148		MN	I	2873.424	2872.583	30	5.	148	
MN	I	2808.840	2808.015	20	6.	148		MN	I	2881.113	2880.270	1		148	
MN	I	2809.211	2808.385	8	13.	148		MN	I	2883.742	2882.899	20	5.	148	
MN	I	2809.929	2809.103	25	6.	148		MN	I	2891.234	2890.388	1		148	
MN	I	2812.164	2811.337	4	36.	148		MN	I	2892.791	2891.945	2		148	
MN	I	2812.917	2812.090	1		148		MN	I	2893.235	2892.388	2	5.	148	
MN	I	2813.666	2812.840	20	8.	148		MN	I	2893.340	2892.493	5		148	
MN	I	2813.760	2812.933	2	36.	148		MN	I	2893.503	2892.657	20	5.	148	
MN	I	2814.316	2813.489	20	8.	148		MN	I	2895.471	2894.625	10	20.	148	
MN	I	2814.816	2813.989	12	7.	148		MN	I	2896.035	2895.188	8	20.	148	
MN	I	2815.289	2814.462	2	36.	148		MN	I	2898.275	2897.428	5	20.	148	
MN	I	2815.845	2815.018	8	36.	148		MN	I	2898.498	2897.651	1		148	
MN	I	2816.436	2815.609	8	36.	148		MN	I	2898.644	2897.797	15	20.	148	
MN	I	2817.991	2817.164	5	36.	148		MN	I	2898.837	2897.990	10	20.	148	
MN	I	2818.495	2817.667	10	22.	148		MN	I	2901.393	2900.545	20	20.	148	
MN	I	2818.797	2817.969	30	6.	148		MN	I	2903.052	2902.203	25	5.	148	
MN	I	2819.598	2818.770	20	8.	148		MN	I	2903.247	2902.399	5	20.	148	
MN	I	2819.747	2818.919	10	8.	148		MN	I	2906.674	2905.825	1		148	
MN	I	2820.205	2819.326	4		148		MN	I	2907.189	2906.340	4		148	
MN	I	2820.555	2819.727	4		148		MN	I	2908.063	2907.214	40	20.	148	
MN	I	2822.280	2821.452	20	6.	148		MN	I	2908.843	2907.993	15	5.	148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	2909.728	2908.878	10	20.	148		MN	I	2956.962	2956.101	20	3.	148	
MN	I	2910.480	2909.630	1		148		MN	I	2957.833	2956.971	10	4.	148	
MN	I	2911.092	2910.242	3		148		MN	I	2964.113	2963.250	10	4.	148	
MN	I	2912.690	2911.839	1		148		MN	I	2964.469	2963.606	20	3.	148	
MN	I	2912.851	2912.000	2		148		MN	I	2967.238	2966.374	1		148	
MN	I	2913.078	2912.226	3		148		MN	I	2971.821	2970.956	4	3.	148	
MN	I	2914.369	2913.518	1		148		MN	I	2974.954	2974.089	20	41.	148	
MN	I	2915.450	2914.599	240	10.	148		MN	I	2977.454	2976.588	1		148	
MN	I	2917.227	2916.375	1		148		MN	I	2977.854	2976.987	1		148	
MN	I	2918.489	2917.637	1		148		MN	I	2978.056	2977.190	1		148	
MN	I	2919.974	2919.122	8	19.	148		MN	I	2978.170	2977.303	3		148	
MN	I	2921.311	2920.458	8		148		MN	I	2978.622	2977.755	1		148	
MN	I	2921.452	2920.599	5		148		MN	I	2978.76J	2977.922	1		148	
MN	I	2921.965	2921.112	1		148		MN	I	2978.981	2978.114	8	41.	148	
MN	I	2923.998	2923.145	2	19.	148		MN	I	2979.200	2978.333	2		148	
MN	I	2924.083	2923.229	2		148		MN	I	2979.432	2978.566	15	3.	148	
MN	I	2924.431	2923.577	3		148		MN	I	2980.861	2979.994	8	41.	148	
MN	I	2924.568	2923.715	10	19.	148		MN	I	2981.360	2980.493	2	41.	148	
MN	I	2925.284	2924.430	10	19.	148		MN	I	2984.871	2984.002	2	41.	148	
MN	I	2925.483	2924.629	2	19.	148		MN	I	2986.861	2985.992	20	3.	148	
MN	I	2926.43	2925.58	220	10.	148		MN	I	2987.275	2986.407	2	41.	148	
MN	I	2929.532	2928.678	40	17.	148		MN	I	2987.920	2987.052	1	41.	148	
MN	I	2931.100	2930.245	20	3.	148		MN	I	2991.005	2990.135	1		148	
MN	I	2934.297	2933.442	3	17.	148		MN	I	2992.257	2991.387	1		148	
MN	I	2934.876	2934.020	30	17.	148		MN	I	2992.979	2992.190	5	3.	148	
MN	I	2936.500	2935.643	15	18.	148		MN	I	2997.054	2996.183	2		148	
MN	I	2936.701	2935.844	3	18.	148		MN	I	2997.341	2996.470	10	3.	148	
MN	I	2937.013	2936.156	10	3.	148		MN	I	2998.698	2997.826	6	42.	148	
MN	I	2938.773	2937.916	20		488		MN	I	2998.928	2998.056	1		148	
MN	I	2939.353	2938.496	2		148		MN	I	2999.472	2998.600	1		148	
MN	I	2940.761	2939.904	20	17.	148		MN	I	3003.251	3002.378	2	42.	148	
MN	I	2941.189	2940.331	200	10.	148		MN	I	3003.489	3002.616	20	3.	148	
MN	I	2941.357	2940.483	2	10.	148		MN	I	3003.998	3003.125	2		148	
MN	I	2941.896	2941.038	40	17.	148		MN	I	3007.503	3006.629	4	3.	148	
MN	I	2942.539	2941.681	5	4.	148		MN	I	3007.976	3007.102	7	42.	148	
MN	I	2943.598	2942.740	8	17.	148		MN	I	3008.524	3007.650	80	35.	148	
MN	I	2944.408	2943.550	1	3.	148		MN	I	3008.924	3008.050	3		148	
MN	I	2948.493	2947.634	3	4.	148		MN	I	3009.132	3008.258	40	35.	148	
MN	I	2951.839	2950.979	3	4.	148		MN	I	3009.696	3008.822	4	3.	148	
MN	I	2953.869	2953.008	10	4.	148		MN	I	3010.253	3009.378	5		148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	3012.040	3011.165	50	35.	148		MN	I	3059.191	3058.305	2		148	
MN	I	3012.251	3011.376	70	35.	148		MN	I	3060.104	3059.217	5		148	
MN	I	3013.729	3012.854	8	3.	148		MN	I	3063.008	3062.120	140	15.	148	
MN	I	3014.809	3013.933	1		148		MN	I	3064.933	3064.045	2		148	
MN	I	3015.541	3014.666	70	35.	148		MN	I	3066.910	3066.022	155	15.	148	
MN	I	3016.059	3015.183	1		148		MN	I	3068.747	3067.858	1		148	
MN	I	3016.791	3015.915	2		148		MN	I	3071.160	3070.270	170	15.	148	
MN	I	3017.330	3016.454	100	35.	148		MN	I	3074.020	3073.180	170	15.	148	
MN	I	3019.894	3019.018	2		148		MN	I	3080.527	3079.635	140	15.	148	
MN	I	3022.551	3021.673	2		148		MN	I	3082.232	3081.340	100	15.	148	
MN	I	3023.621	3022.743	110	35.	148		MN	I	3082.952	3082.060	40	15.	148	
MN	I	3024.871	3023.993	1		148		MN	I	3083.139	3082.246	2		148	
MN	I	3028.715	3027.836	1		148		MN	I	3083.399	3082.507	2		148	
MN	I	3034.204	3033.324	1		148		MN	I	3083.605	3082.713	15		148	
MN	I	3035.288	3034.408	1		148		MN	I	3084.918	3084.025	1		148	
MN	I	3039.498	3038.616	3		148		MN	I	3085.772	3084.879	2		148	
MN	I	3040.050	3039.169	1		148		MN	I	3088.272	3087.378	1		148	
MN	I	3041.482	3040.600	100	34.	148		MN	I	3088.685	3087.791	3		148	
MN	I	3042.103	3041.220	30	34.	148		MN	I	3088.837	3087.944	2		148	
MN	I	3042.366	3041.483	1		148		MN	I	3090.581	3089.686	1		148	
MN	I	3043.202	3042.319	3		148		MN	I	3091.993	3091.098	3		148	
MN	I	3043.617	3042.734	30	34.	148		MN	I	3092.568	3091.673	4		148	
MN	I	3043.788	3042.905	2		148		MN	I	3093.444	3092.549	7		148	
MN	I	3044.021	3043.139	15	34.	148		MN	I	3093.767	3092.872	10		148	
MN	I	3044.237	3043.355	60	34.	148		MN	I	3094.016	3093.121	2		148	
MN	I	3044.651	3043.768	20	34.	148		MN	I	3094.247	3093.352	4		148	
MN	I	3045.449	3044.566	220	15.	148		MN	I	3094.362	3093.467	1		148	
MN	I	3046.473	3045.590	80	34.	148		MN	I	3094.584	3093.689	2		148	
MN	I	3046.688	3045.804	30	34.	148		MN	I	3095.714	3094.819	1		148	
MN	I	3047.471	3046.588	4		148		MN	I	3096.139	3095.244	1		148	
MN	I	3047.915	3047.032	125	34.	148		MN	I	3097.280	3096.384	8		148	
MN	I	3049.744	3048.860	40	34.	148		MN	I	3097.906	3097.010	20		148	
MN	I	3050.852	3049.967	2		148		MN	I	3097.960	3097.063	30		148	
MN	I	3050.984	3050.100	3		148		MN	I	3098.655	3097.758	5		148	
MN	I	3054.181	3053.298	2		148		MN	I	3098.991	3098.092	10		148	
MN	I	3055.248	3054.362	200	15.	148		MN	I	3100.197	3099.301	1		148	
MN	I	3056.801	3055.915	2		148		MN	I	3101.164	3100.267	8		148	
MN	I	3057.357	3056.471	4		148		MN	I	3101.207	3100.310	10		148	
MN	I	3057.879	3056.992	4		148		MN	I	3102.426	3101.529	30		148	
MN	I	3058.619	3057.733	1		148		MN	I	3102.733	3101.836	2		148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	I	3104.178	3103.280	1	38.	148		MN	I	3146.367	3145.458	2		148	
MN	I	3107.234	3106.336	2		148		MN	I	3146.635	3145.727	1		148	
MN	I	3107.647	3106.748	10		148		MN	I	3147.232	3146.324	6		148	
MN	I	3108.675	3107.776	20	38.	148		MN	I	3149.091	3148.182	140	19.	148	
MN	I	3109.533	3108.634	10	38.	148		MN	I	3149.766	3148.857	8		148	
MN	I	3110.334	3109.435	4		148		MN	I	3150.438	3149.529	6		148	
MN	I	3111.580	3110.681	50		148		MN	I	3150.837	3149.928	5		148	
MN	I	3112.046	3111.147	2		143		MN	I	3151.525	3150.616	2		148	
MN	I	3114.018	3113.118	10		148		MN	I	3151.710	3150.800	1		148	
MN	I	3114.263	3113.362	4		148		MN	I	3152.325	3151.415	10		148	
MN	I	3114.701	3113.800	15		148		MN	I	3153.158	3152.248	5		148	
MN	I	3115.015	3114.115	3		148		MN	I	3153.427	3152.517	4	P	148	
MN	I	3115.343	3114.440	1		148		MN	I	3154.303	3153.393	7		148	
MN	I	3116.363	3115.462	40		148		MN	I	3156.005	3155.094	1		148	
MN	I	3116.655	3115.754	3		148		MN	I	3156.692	3155.781	10		148	
MN	I	3117.724	3116.822	2		148		MN	I	3157.157	3156.245	2		148	
MN	I	3118.407	3117.505	3		148		MN	I	3157.303	3156.392	1		148	
MN	I	3119.001	3118.099	8		148		MN	I	3158.570	3157.658	3		148	
MN	I	3121.239	3120.337	30		148		MN	I	3158.722	3157.811	3		148	
MN	I	3121.974	3121.072	6		148		MN	I	3159.646	3158.723	10		148	
MN	I	3122.816	3121.914	1		148		MN	I	3160.737	3159.825	4		148	
MN	I	3123.703	3122.880	10		148		MN	I	3160.864	3159.952	20		148	
MN	I	3125.916	3125.013	8		148		MN	I	3161.067	3160.155	6		148	
MN	I	3127.095	3126.192	2		148		MN	I	3161.962	3161.050	140	19.	148	
MN	I	3127.749	3126.846	10		148		MN	I	3163.123	3162.210	1		148	
MN	I	3130.875	3129.971	3		148		MN	I	3164.278	3163.365	1		148	
MN	I	3131.528	3130.624	2		148		MN	I	3164.447	3163.534	1		148	
MN	I	3133.189	3132.284	15		148		MN	I	3166.166	3165.253	1		148	
MN	I	3133.694	3132.789	10		148		MN	I	3167.741	3166.827	10		148	
MN	I	3135.827	3134.922	4		148		MN	I	3168.067	3167.153	2		148	
MN	I	3136.094	3135.188	2		148		MN	I	3168.533	3167.619	3		148	
MN	I	3137.863	3136.958	10		148		MN	I	3168.741	3167.827	8		148	
MN	I	3139.128	3138.222	5		148		MN	I	3168.849	3167.935	1		148	
MN	I	3142.462	3141.555	1		148		MN	I	3169.168	3168.254	4		148	
MN	I	3142.728	3141.821	5		148		MN	I	3169.594	3168.680	2		148	
MN	I	3143.309	3142.401	1		148		MN	I	3170.269	3169.356	4		148	
MN	I	3143.577	3142.669	20		148		MN	I	3171.341	3170.427	4		148	
MN	I	3145.027	3144.119	1		148		MN	I	3174.760	3173.845	3		148	
MN	I	3145.130	3144.222	1		148		MN	I	3175.662	3174.746	20		148	
MN	I	3145.780	3144.872	3		148		MN	I	3176.270	3175.355	3		148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	I	3176.491	3175.576	12		148		MN	I	3237.950	3237.019	1		148	
MN	I	3176.629	3175.713	10		148		MN	I	3238.377	3237.443	220		148	
MN	I	3177.961	3177.044	10		148		MN	I	3239.652	3238.720	5		148	
MN	I	3178.532	3177.616	5		148		MN	I	3241.331	3240.408	125	13.	148	
MN	I	3179.418	3178.501	140	19.	148		MN	I	3241.545	3240.613	100	14.	148	
MN	I	3179.647	3178.730	2		148		MN	I	3241.814	3240.882	6		148	
MN	I	3182.186	3181.269	1		148		MN	I	3243.071	3242.139	1		148	
MN	I	3182.907	3181.990	1		148		MN	I	3243.395	3242.463	2		148	
MN	I	3183.406	3182.498	2		148		MN	I	3244.710	3243.777	220	14.	148	
MN	I	3186.014	3185.096	10		148		MN	I	3247.086	3246.153	3		148	
MN	I	3187.426	3186.507	1		148		MN	I	3249.446	3248.512	260	14.	148	
MN	I	3188.132	3187.213	2		148		MN	I	3250.827	3249.894	6		148	
MN	I	3190.879	3189.959	15		148		MN	I	3252.064	3251.134	125	14.	148	
MN	I	3193.347	3192.426	10		148		MN	I	3253.884	3252.949	220	14.	148	
MN	I	3194.709	3193.788	1		148		MN	I	3254.972	3254.037	100	13.	148	
MN	I	3195.583	3194.663	1		148		MN	I	3256.443	3255.508	5		148	
MN	I	3195.775	3194.855	1		148		MN	I	3257.072	3256.137	220	14.	148	
MN	I	3196.908	3195.988	2		148		MN	I	3259.350	3258.414	200	14.	148	
MN	I	3202.035	3201.113	10		148		MN	I	3261.174	3260.238	170	14.	148	
MN	I	3203.127	3202.205	4		148		MN	I	3263.271	3262.333	3		148	
MN	I	3204.053	3203.131	4		148		MN	I	3263.975	3263.037	2		148	
MN	I	3207.833	3206.910	80	14.	148		MN	I	3265.648	3264.710	170		148	
MN	I	3212.105	3211.270	4		148		MN	I	3268.728	3267.789	80		148	
MN	I	3213.812	3212.887	140	14.	148		MN	I	3269.659	3268.720	70		148	
MN	I	3217.874	3216.947	100	3.	148		MN	I	3271.252	3270.353	60		148	
MN	I	3225.627	3224.758	125	3.	148		MN	I	3271.720	3270.781	5		148	
MN	I	3226.976	3226.048	100	14.	148		MN	I	3273.956	3273.016	50		148	
MN	I	3227.968	3227.039	2		148		MN	I	3279.004	3278.062	15		148	
MN	I	3229.024	3228.092	320	14.	148		MN	I	3279.493	3278.551	100		148	
MN	I	3231.160	3230.231	10		148		MN	I	3280.692	3279.751	5		148	
MN	I	3231.646	3230.716	220	14.	148		MN	I	3281.311	3280.370	5		148	
MN	I	3234.872	3233.939	85		148		MN	I	3281.706	3280.763	100		148	
MN	I	3234.920	3233.997	110		148		MN	I	3282.357	3281.415	1		148	
MN	I	3235.046	3234.112	80		148		MN	I	3282.475	3281.532	2		148	
MN	I	3235.667	3234.737	4		148		MN	I	3286.425	3285.482	1		148	
MN	I	3235.846	3234.912	10		148		MN	I	3289.492	3288.548	1		148	
MN	I	3235.959	3235.025	140		148		MN	I	3289.588	3288.644	2		148	
MN	I	3236.241	3235.307	170		148		MN	I	3290.051	3289.106	1		148	
MN	I	3237.446	3236.515	5		148		MN	I	3291.914	3290.969	25		148	
MN	I	3237.709	3236.778	320	14.	148		MN	I	3294.975	3294.030	1		148	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
MN	I	3295.880	3294.934	1		148		MN	II	2001.165	2000.520	80		328	
MN	I	3296.788	3295.840	20		148		MN	II	2002.55	2001.91	60		328	
MN	I	3296.970	3296.025	40		148		MN	II	2004.00	2003.35	20		328	
MN	I	3297.828	3296.879	125		148		MN	II	2004.89	2004.32	1		328	
MN	I	3299.175	3298.228	110		148		MN	II	2005.21	2004.56	60		328	
MN	I	3301.891	3300.943	10		148		MN	II	2005.811	2005.165	15		328	
MN	I	3304.229	3303.280	100		148		MN	II	2007.331	2006.882	15		328	
MN	I	3304.629	3303.681	1		148		MN	II	2008.55	2007.90	3		328	
MN	I	3305.848	3304.898	15		148		MN	II	2009.71	2009.06	1		328	
MN	I	3306.953	3306.004	2		148		MN	II	2010.14	2009.48	3		328	
MN	I	3307.947	3306.998	40		148		MN	II	2012.579	2011.928	100		328	
MN	I	3309.014	3308.065	8		148		MN	II	2012.769	2012.119	100		328	
MN	I	3309.727	3308.778	40		148		MN	II	2013.448	2012.799	30		328	
MN	I	3310.377	3309.428	2		148		MN	II	2013.807	2013.157	20		328	
MN	I	3312.538	3311.588	6		148		MN	II	2014.545	2013.895	100		328	
MN	I	3312.844	3311.895	100		148		MN	II	2016.85	2016.20	5		328	
MN	I	3314.001	3313.050	1		148		MN	II	2017.70	2017.05	40		328	
MN	I	3314.150	3313.200	50		148		MN	II	2017.82	2017.17	5		328	
MN	I	3314.408	3313.458	10		148		MN	II	2020.790	2020.141	30		328	
MN	I	3314.511	3313.560	40		148		MN	II	2021.664	2021.023	5		328	
MN	I	3315.097	3314.148	10		148		MN	II	2022.48	2021.83	50		328	
MN	I	3315.365	3314.415	50		148		MN	II	2024.28	2023.63	5		328	
MN	I	3315.840	3314.889	100		148		MN	II	2025.00	2024.35	2		328	
MN	I	3316.294	3315.343	4		148		MN	II	2026.11	2025.46	5		328	
MN	I	3316.926	3315.975	7		148		MN	II	2027.19	2026.54	40		328	
MN	I	3317.270	3316.319	20		148		MN	II	2030.750	2030.098	20		328	
MN	I	3317.410	3316.459	60		148		MN	II	2031.85	2031.20	30		328	
MN	I	3318.240	3317.289	140		148		MN	II	2032.81	2032.16	10		328	
MN	I	3319.824	3318.874	1		148		MN	II	2034.58	2033.93	50		328	
MN	I	3320.825	3319.873	3		148		MN	II	2035.785	2035.133	15		328	
MN	I	3321.644	3320.692	100		148		MN	II	2037.98	2037.31	200		328	
MN	I	3323.247	3322.295	6		148		MN	II	2038.300	2037.643	200		328	
MN	I	3324.586	3323.633	6		148		MN	II	2040.62	2039.97	200		328	
MN	I	3331.618	3330.663	100		148		MN	II	2042.283	2041.630	40		328	
MN	I	3335.513	3334.557	8		148		MN	II	2042.79	2042.14	10		328	
MN	I	3335.995	3335.039	3		148		MN	II	2043.16	2042.50	10		328	
								MN	II	2043.78	2043.12	40		328	
								MN	II	2044.09	2043.43	1		328	
								MN	II	2044.455	2043.800	15		328	
								MN	II	2047.25	2046.59	20		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2060.50	2059.83	1		328		MN	II	2118.57	2117.90	1		328	
MN	II	2064.704	2064.043	15		328		MN	II	2119.124	2118.454	30		328	
MN	II	2074.248	2073.584	2		328		MN	II	2119.39	2118.72	1		328	
MN	II	2075.83	2074.97	5		328		MN	II	2120.08	2119.40	30		328	
MN	II	2076.873	2076.210	170		328		MN	II	2120.32	2119.65	100		328	
MN	II	2077.33	2076.66	3		328		MN	II	2120.45	2119.78	60		328	
MN	II	2077.607	2076.946	15		328		MN	II	2120.94	2120.27	15		328	
MN	II	2080.35	2079.69	5		328		MN	II	2121.34	2120.67	1		328	
MN	II	2081.98	2081.30	20		328		MN	II	2129.83	2129.16	2		328	
MN	II	2082.210	2081.548	20		328		MN	II	2130.58	2129.91	1		328	
MN	II	2085.42	2084.76	100		328		MN	II	2131.73	2131.05	30		328	
MN	II	2086.80	2086.14	10		328		MN	II	2132.16	2131.48	2		328	
MN	II	2087.12	2086.45	2		328		MN	II	2132.81	2132.14	1		328	
MN	II	2087.51	2086.84	30		328		MN	II	2134.126	2133.452	100		328	
MN	II	2089.58	2088.91	40		328		MN	II	2135.24	2134.57	20		328	
MN	II	2089.95	2089.29	10		328		MN	II	2135.89	2135.21	50		328	
MN	II	2093.25	2092.59	30		328		MN	II	2136.51	2135.83	2		328	
MN	II	2098.130	2097.463	140		328		MN	II	2136.90	2136.23	1		328	
MN	II	2098.968	2098.301	10		328		MN	II	2137.02	2136.35	20		328	
MN	II	2099.84	2099.17	5		328		MN	II	2137.85	2137.17	15		328	
MN	II	2100.92	2100.25	8		328		MN	II	2139.63	2138.96	1		328	
MN	II	2102.52	2101.86	5		328		MN	II	2140.20	2139.52	1		328	
MN	II	2103.17	2102.50	140		328		MN	II	2141.025	2140.350	20		328	
MN	II	2104.85	2104.18	10		328		MN	II	2144.05	2143.37	40		328	
MN	II	2105.25	2104.57	30		328		MN	II	2146.20	2145.60	10		328	
MN	II	2106.56	2105.89	20		328		MN	II	2147.09	2146.42	2		328	
MN	II	2106.79	2106.12	5		328		MN	II	2148.11	2147.43	10		328	
MN	II	2107.436	2106.760	30		328		MN	II	2149.52	2148.84	30		328	
MN	II	2107.64	2106.97	5		328		MN	II	2150.029	2149.350	8		328	
MN	II	2108.73	2108.06	100		328		MN	II	2150.81	2150.13	1		328	
MN	II	2110.13	2109.46	5		328		MN	II	2150.935	2150.260	30		328	
MN	II	2111.692	2111.022	10		328		MN	II	2153.103	2152.427	60		328	
MN	II	2112.31	2111.64	1		328		MN	II	2156.027	2155.349	5		328	
MN	II	2112.46	2111.79	2		328		MN	II	2156.55	2155.87	2		328	
MN	II	2112.68	2112.01	3		328		MN	II	2156.61	2155.94	10		328	
MN	II	2113.21	2112.54	0		328		MN	II	2157.656	2156.977	5		328	
MN	II	2114.834	2113.984	170		328		MN	II	2158.83	2158.16	1		328	
MN	II	2116.062	2115.391	10		328		MN	II	2159.37	2158.69	1		328	
MN	II	2116.34	2115.67	2		328		MN	II	2162.013	2161.333	5		328	
MN	II	2116.72	2116.05	10		328		MN	II	2163.77	2163.09	20		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	2166.27	2165.58	50		328		MN	II	2312.81	2312.10	3		328	
MN	II	2167.091	2166.412	50		328		MN	II	2313.39	2312.68	30		328	
MN	II	2167.373	2166.693	50		328		MN	II	2316.38	2315.66	10		328	
MN	II	2170.63	2169.95	60		328		MN	II	2316.87	2316.16	5		328	
MN	II	2171.57	2170.89	30		328		MN	II	2318.99	2318.28	5		328	
MN	II	2176.24	2175.55	80		328		MN	II	2319.63	2318.91	30		328	
MN	II	2191.32	2190.64	5		328		MN	II	2320.05	2319.33	8		328	
MN	II	2197.512	2196.826	5		328		MN	II	2320.148	2319.434	1		328	
MN	II	2200.29	2199.60	10		328		MN	II	2320.68	2319.97	3		328	
MN	II	2200.47	2199.78	80		328		MN	II	2320.93	2320.21	15		328	
MN	II	2202.40	2201.71	1		328		MN	II	2321.14	2320.42	60		328	
MN	II	2202.60	2201.91	1		328		MN	II	2321.59	2320.87	1		328	
MN	II	2203.39	2202.70	40		328		MN	II	2322.25	2321.54	1		328	
MN	II	2204.236	2203.547	2		328		MN	II	2323.04	2322.33	8		328	
MN	II	2207.325	2206.637	10		328		MN	II	2325.38	2324.66	10		328	
MN	II	2207.54	2206.85	10		328		MN	II	2326.65	2325.93	30		328	
MN	II	2208.544	2207.854	5		328		MN	II	2326.93	2326.22	12		328	
MN	II	2210.72	2210.03	3		328		MN	II	2327.60	2326.89	2		328	
MN	II	2211.28	2210.59	2		328		MN	II	2327.87	2327.15	12		328	
MN	II	2211.87	2211.18	15		328		MN	II	2327.95	2327.23	5		328	
MN	II	2217.88	2217.19	1		328		MN	II	2328.35	2327.63	12		328	
MN	II	2218.05	2217.36	2		328		MN	II	2328.61	2327.90	1		328	
MN	II	2223.265	2222.573	10		328		MN	II	2329.36	2328.64	15		328	
MN	II	2230.63	2229.94	10		328		MN	II	2329.45	2328.74	5		328	
MN	II	2230.68	2229.99	10		328		MN	II	2329.55	2328.84	30		328	
MN	II	2232.35	2231.66	10		328		MN	II	2330.24	2329.52	15		328	
MN	II	2260.26	2259.56	1		328		MN	II	2331.58	2330.86	2		328	
MN	II	2270.550	2269.847	30		328		MN	II	2332.856	2332.141	15		328	
MN	II	2278.74	2278.04	5		328		MN	II	2333.13	2332.42	2		328	
MN	II	2282.68	2281.98	1		328		MN	II	2333.95	2333.23	10		328	
MN	II	2297.48	2296.77	20		328		MN	II	2335.49	2334.77	0		328	
MN	II	2297.64	2296.93	3		328		MN	II	2335.640	2334.924	20		328	
MN	II	2298.30	2297.59	5		328		MN	II	2338.674	2337.956	30		328	
MN	II	2298.40	2297.69	5		328		MN	II	2338.943	2338.225	10		328	
MN	II	2299.667	2298.959	60	2	328	H	MN	II	2340.47	2339.75	2		328	
MN	II	2300.22	2299.51	5		328		MN	II	2340.71	2340.00	2		328	
MN	II	2300.91	2300.20	5		328		MN	II	2341.304	2340.586	30		328	
MN	II	2305.718	2305.009	100	2	328	H	MN	II	2341.89	2341.17	20		328	
MN	II	2309.50	2308.79	5		328		MN	II	2343.52	2342.80	1		328	
MN	II	2309.68	2308.97	10		328		MN	II	2344.37	2343.65	1		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2345.057	2344.338	20		328		MN	II	2381.001	2380.275	10		328	
MN	II	2345.10	2344.38	5		328		MN	II	2381.745	2381.019	10		328	
MN	II	2346.55	2345.83	0		328		MN	II	2382.23	2381.51	1		328	
MN	II	2346.70	2345.98	0		328		MN	II	2382.53	2381.80	2		328	
MN	II	2347.25	2346.53	2		328		MN	II	2382.638	2381.911	1		328	
MN	II	2348.57	2347.85	1		328		MN	II	2382.84	2382.11	2		328	
MN	II	2348.82	2348.10	1		328		MN	II	2383.61	2382.88	12		328	
MN	II	2348.87	2348.14	0		328		MN	II	2383.719	2382.991	20		328	
MN	II	2349.55	2348.83	30		328		MN	II	2384.648	2383.921	30		328	
MN	II	2349.949	2349.231	15		328		MN	II	2384.858	2384.131	0		328	
MN	II	2355.63	2354.91	2	38.	328		MN	II	2385.06	2384.33	10		328	
MN	II	2356.37	2355.66	3	38.	328		MN	II	2385.640	2384.912	12		328	
MN	II	2357.512	2356.790	20	38.	328		MN	II	2385.823	2385.096	10		328	
MN	II	2357.95	2357.23	1		328		MN	II	2386.259	2385.532	10		328	
MN	II	2358.418	2357.686	30	38.	328		MN	II	2386.344	2385.618	10		328	
MN	II	2359.169	2358.448	50	38.	328		MN	II	2386.934	2386.206	15		328	
MN	II	2360.108	2359.386	20	38.	328		MN	II	2387.243	2386.515	0		328	
MN	II	2360.19	2359.47	30	38.	328		MN	II	2387.333	2386.605	10		328	
MN	II	2360.534	2359.815	15		328		MN	II	2387.443	2386.715	8		328	
MN	II	2360.822	2360.099	30	38.	328		MN	II	2387.535	2386.807	12		328	
MN	II	2360.957	2360.234	30	38.	328		MN	II	2387.668	2386.940	20		328	
MN	II	2362.491	2361.768	80	38.	328		MN	II	2387.732	2387.004	40	48.	328	
MN	II	2363.029	2362.307	5		328		MN	II	2387.956	2387.268	8		328	
MN	II	2364.55	2363.83	1		328		MN	II	2388.062	2387.335	12		328	
MN	II	2367.63	2366.91	30		328		MN	II	2388.507	2387.779	8		328	
MN	II	2369.12	2368.40	0		328		MN	II	2389.43	2388.70	20		328	
MN	II	2369.62	2368.90	10		328		MN	II	2389.45	2388.72	5		328	
MN	II	2370.49	2369.77	8		328		MN	II	2389.702	2388.973	20		328	
MN	II	2370.81	2370.09	12		328		MN	II	2389.803	2389.075	5		328	
MN	II	2371.43	2370.70	20		328		MN	II	2390.218	2389.490	30		328	
MN	II	2372.481	2371.758	10		328		MN	II	2390.520	2389.792	2		328	
MN	II	2374.082	2373.357	140	38.	328		MN	II	2392.011	2391.281	20		328	
MN	II	2374.21	2373.49	15		328		MN	II	2393.25	2392.52	10		328	
MN	II	2377.455	2376.730	20		328		MN	II	2394.43	2393.70	3		328	
MN	II	2378.07	2377.34	8		328		MN	II	2395.124	2394.395	10		328	
MN	II	2379.276	2378.610	8		328		MN	II	2395.27	2394.54	25		328	
MN	II	2379.58	2378.86	10		328		MN	II	2396.114	2395.383	40	48.	328	
MN	II	2379.73	2379.01	5		328		MN	II	2396.16	2395.43	30	48.	328	
MN	II	2379.82	2379.10	0		328		MN	II	2396.53	2395.80	1		328	
MN	II	2380.13	2379.40	0		328		MN	II	2397.197	2396.467	8		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2398.016	2397.286	25		328		MN	II	2414.51	2413.78	0		328	
MN	II	2398.599	2397.868	25		328		MN	II	2414.82	2414.08	5		328	
MN	II	2398.813	2398.082	5		328		MN	II	2415.08	2414.33	8		328	
MN	II	2398.97	2398.24	10		328		MN	II	2415.38	2414.65	5		328	
MN	II	2399.180	2398.429	0		328		MN	II	2417.081	2416.347	70	37.	328	
MN	II	2399.522	2398.792	30		328		MN	II	2417.447	2416.712	30		328	
MN	II	2399.791	2399.061	12		328		MN	II	2418.676	2417.941	50	37.	328	
MN	II	2400.131	2399.400	25		328		MN	II	2419.014	2418.279	15		328	
MN	II	2400.32	2399.59	3		328		MN	II	2419.33	2418.60	1		328	
MN	II	2400.416	2399.685	3		328		MN	II	2419.873	2419.138	20		328	
MN	II	2400.881	2400.150	25		328		MN	II	2420.09	2419.35	2		328	
MN	II	2400.952	2400.221	10		328		MN	II	2420.18	2419.44	1		328	
MN	II	2401.16	2400.43	15		328		MN	II	2420.36	2419.63	8		328	
MN	II	2401.68	2400.94	0		328		MN	II	2420.547	2419.811	20	37.	328	
MN	II	2401.82	2401.09	15	48.	328		MN	II	2420.80	2420.08	10		328	
MN	II	2401.85	2401.12	0	48.	328		MN	II	2420.997	2420.262	10		328	
MN	II	2402.030	2401.298	3		328		MN	II	2421.454	2420.719	15		328	
MN	II	2402.447	2401.715	30	48.	328		MN	II	2421.84	2421.10	12		328	
MN	II	2402.56	2401.83	1		328		MN	II	2422.12	2421.38	10		328	
MN	II	2402.688	2401.957	15		328		MN	II	2423.45	2422.71	3		328	
MN	II	2402.812	2402.080	25		328		MN	II	2423.486	2422.749	15		328	
MN	II	2403.262	2402.530	12		328		MN	II	2424.00	2423.26	5		328	
MN	II	2404.141	2403.409	15		328		MN	II	2424.617	2423.881	15		328	
MN	II	2404.209	2403.477	10		328		MN	II	2424.98	2424.24	5		328	
MN	II	2404.37	2403.64	1		328		MN	II	2425.48	2424.74	1		328	
MN	II	2408.58	2405.83	1		328		MN	II	2426.343	2425.606	10		328	
MN	II	2408.63	2405.90	10		328		MN	II	2426.419	2425.683	1		328	
MN	II	2408.833	2406.101	5		328		MN	II	2426.65	2425.92	5		328	
MN	II	2407.962	2407.230	12		328		MN	II	2426.78	2426.04	1		328	
MN	II	2408.340	2407.608	10		328		MN	II	2427.30	2426.56	0		328	
MN	II	2408.61	2407.88	2		328		MN	II	2427.865	2427.127	5		328	
MN	II	2408.890	2408.157	2		328		MN	II	2428.115	2427.379	140	74.	328	
MN	II	2409.134	2408.401	15		328		MN	II	2428.455	2427.719	220	74.	328	
MN	II	2409.590	2408.857	60	37.	328		MN	II	2428.676	2427.939	170	74.	328	
MN	II	2409.787	2409.053	12		328		MN	II	2429.44	2428.70	1		328	
MN	II	2409.90	2409.17	12		328		MN	II	2429.60	2428.86	1		328	
MN	II	2411.320	2410.586	100	37.	328		MN	II	2430.034	2429.297	20		328	
MN	II	2411.545	2410.811	12		328		MN	II	2430.16	2429.41	0		328	
MN	II	2413.475	2412.740	60	37.	328		MN	II	2430.93	2430.19	5		328	
MN	II	2414.37	2413.64	15		328		MN	II	2431.22	2430.48	2		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2431.96	2431.22	3		328		MN	II	2446.66	2445.91	0		328	
MN	II	2432.07	2431.33	8		328		MN	II	2446.93	2446.19	5		328	
MN	II	2432.89	2432.16	3		328		MN	II	2447.12	2446.38	60	105.	328	
MN	II	2433.02	2432.28	2		328		MN	II	2447.330	2446.590	10	105.	328	
MN	II	2433.61	2432.87	0		328		MN	II	2447.41	2446.66	2		328	
MN	II	2434.048	2433.310	30		328		MN	II	2447.544	2446.803	5		328	
MN	II	2434.48	2433.74	0		328		MN	II	2447.629	2446.888	20		328	
MN	II	2434.58	2433.84	12		328		MN	II	2447.910	2447.170	10		328	
MN	II	2434.81	2434.07	0		328		MN	II	2448.438	2447.697	5		328	
MN	II	2435.36	2434.62	2		328		MN	II	2448.544	2447.803	8		328	
MN	II	2435.45	2434.72	25		328		MN	II	2448.697	2447.956	20		328	
MN	II	2435.896	2435.156	25		328		MN	II	2449.277	2448.535	0		328	
MN	II	2435.988	2435.251	5		328		MN	II	2449.34	2448.59	10		328	
MN	II	2436.05	2435.32	0		328		MN	II	2449.43	2448.68	10		328	
MN	II	2437.00	2436.26	1		328		MN	II	2449.508	2448.766	10		328	
MN	II	2437.277	2436.538	30		328		MN	II	2450.180	2449.438	5		328	
MN	II	2437.73	2436.99	15		328		MN	II	2450.344	2449.602	10		328	
MN	II	2437.85	2437.11	2		328		MN	II	2450.484	2449.742	40		328	
MN	II	2438.105	2437.366	170	74.	328		MN	II	2451.064	2450.317	2		328	
MN	II	2438.582	2437.844	140	74.	328		MN	II	2452.543	2451.800	20		328	
MN	II	2438.811	2438.072	15		328		MN	II	2452.900	2452.157	8	105.	328	
MN	II	2438.926	2438.187	100	74.	328		MN	II	2453.072	2452.328	60	105.	328	
MN	II	2439.217	2438.478	20		328		MN	II	2453.229	2452.486	170	74.	328	
MN	II	2439.67	2438.93	10		328		MN	II	2453.876	2453.133	100	74.	328	
MN	II	2440.63	2439.89	1		328		MN	II	2454.114	2453.371	10		328	
MN	II	2441.193	2440.453	30		328		MN	II	2454.364	2453.620	80	74.	328	
MN	II	2441.797	2441.056	40		328		MN	II	2454.464	2453.721	8		328	
MN	II	2441.879	2441.139	20		328		MN	II	2454.57	2453.83	8		328	
MN	II	2441.97	2441.23	1		328		MN	II	2455.01	2454.26	10		328	
MN	II	2442.211	2441.471	10	105.	328		MN	II	2455.389	2454.646	5		328	
MN	II	2442.348	2441.609	5		328		MN	II	2455.826	2455.083	10		328	
MN	II	2443.31	2442.57	0		328		MN	II	2456.101	2455.358	15		328	
MN	II	2443.42	2442.68	10		328		MN	II	2456.85	2456.10	2		328	
MN	II	2443.56	2442.82	20		328		MN	II	2457.512	2456.768	15		328	
MN	II	2444.155	2443.414	15		328		MN	II	2458.134	2457.390	10		328	
MN	II	2444.550	2443.809	20		328		MN	II	2458.530	2457.785	20		328	
MN	II	2444.59	2443.85	15		328		MN	II	2458.624	2457.880	8	105.	328	
MN	II	2444.688	2443.946	1		328		MN	II	2458.973	2458.229	5		328	
MN	II	2445.26	2444.51	40		328		MN	II	2459.06	2458.32	15		328	
MN	II	2446.428	2445.686	30		328		MN	II	2459.322	2458.577	60	105.	328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	2459.477	2458.733	30		328		MN	II	2469.532	2468.786	5		328	
MN	II	2459.61	2458.86	0		328		MN	II	2470.040	2469.292	30		328	
MN	II	2459.680	2458.935	0		328		MN	II	2470.35	2469.60	1		328	
MN	II	2459.786	2459.042	10		328		MN	II	2470.76	2470.01	15		328	
MN	II	2459.879	2459.135	3		328		MN	II	2471.08	2470.33	5		328	
MN	II	2460.27	2459.53	8		328		MN	II	2471.596	2470.879	10		328	
MN	II	2460.31	2459.56	8		328		MN	II	2471.91	2471.16	3		328	
MN	II	2460.70	2459.96	2		328		MN	II	2472.00	2471.25	5		328	
MN	II	2461.01	2460.26	5		328		MN	II	2472.726	2471.979	10		328	
MN	II	2461.34	2460.59	1		328		MN	II	2472.88	2472.14	1		328	
MN	II	2461.438	2460.694	40		328		MN	II	2473.121	2472.370	25		328	
MN	II	2461.84	2461.09	5		328		MN	II	2473.328	2472.581	5		328	
MN	II	2462.05	2461.31	0		328		MN	II	2473.594	2472.847	60		328	
MN	II	2462.271	2461.525	20		328		MN	II	2473.81	2473.06	2		328	
MN	II	2462.599	2461.853	50		328		MN	II	2474.304	2473.556	30		328	
MN	II	2462.870	2462.125	10		328		MN	II	2474.372	2473.625	5		328	
MN	II	2463.018	2462.276	8		328		MN	II	2474.438	2473.691	10		328	
MN	II	2463.154	2462.409	20		328		MN	II	2475.638	2474.890	30		328	
MN	II	2464.022	2463.277	10		328		MN	II	2475.715	2474.967	50		328	
MN	II	2464.668	2463.923	20		328		MN	II	2475.843	2475.095	10		328	
MN	II	2465.31	2464.57	10		328		MN	II	2476.247	2475.498	30		328	
MN	II	2465.48	2464.74	15		328		MN	II	2476.499	2475.751	8		328	
MN	II	2465.824	2465.075	30		328		MN	II	2476.77	2476.02	15		328	
MN	II	2465.97	2465.22	2		328		MN	II	2477.57	2476.83	5		328	
MN	II	2466.16	2465.41	2		328		MN	II	2477.79	2477.04	1		328	
MN	II	2466.34	2465.59	2		328		MN	II	2477.933	2477.185	15		328	
MN	II	2466.691	2465.944	10		328		MN	II	2478.70	2477.95	1		328	
MN	II	2466.76	2466.02	8		328		MN	II	2479.034	2478.284	15		328	
MN	II	2466.960	2466.214	100	64.	328		MN	II	2479.16	2478.41	20		328	
MN	II	2467.161	2466.415	80	64.	328		MN	II	2479.23	2478.48	18		328	
MN	II	2467.469	2466.723	3		328		MN	II	2479.735	2478.985	20		328	
MN	II	2467.73	2466.99	5		328		MN	II	2479.80	2479.05	18		328	
MN	II	2467.790	2467.044	15		328		MN	II	2479.953	2479.204	2		328	
MN	II	2468.292	2467.546	5		328		MN	II	2480.034	2479.284	20		328	
MN	II	2468.428	2467.685	5		328		MN	II	2480.103	2479.354	20		328	
MN	II	2468.503	2467.757	15		328		MN	II	2481.45	2480.70	10		328	
MN	II	2468.59	2467.84	10		328		MN	II	2481.712	2480.963	50		328	
MN	II	2468.724	2467.978	70	64.	328		MN	II	2481.99	2481.24	8		328	
MN	II	2468.988	2468.241	30	64.	328		MN	II	2482.458	2481.708	20		328	
MN	II	2469.155	2468.409	5		328		MN	II	2482.57	2481.82	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2482.79	2482.04	8		328		MN	II	2496.62	2495.87	20		328	
MN	II	2482.92	2482.17	50		328		MN	II	2497.310	2496.557	2		328	
MN	II	2483.16	2482.41	2		328		MN	II	2497.658	2496.905	40		328	
MN	II	2483.353	2482.604	3		328		MN	II	2497.84	2497.08	15		328	
MN	II	2483.69	2482.94	50		328		MN	II	2498.442	2497.685	20		328	
MN	II	2484.131	2483.381	40		328		MN	II	2498.524	2497.771	2		328	
MN	II	2484.291	2483.541	0		328		MN	II	2498.764	2499.003	220	45.	328	
MN	II	2484.95	2484.20	3		328		MN	II	2499.97	2499.21	30		328	
MN	II	2485.24	2484.49	5		328		MN	II	2500.48	2499.73	2		328	
MN	II	2485.295	2484.545	5		328		MN	II	2500.819	2500.064	20		328	
MN	II	2485.486	2484.745	10		328		MN	II	2501.172	2500.418	20		328	
MN	II	2485.555	2484.808	15		328		MN	II	2501.242	2500.487	20		328	
MN	II	2485.86J	2485.052	60		328		MN	II	2501.38	2500.62	20		328	
MN	II	2486.093	2485.343	10		328		MN	II	2503.17	2502.41	30		328	
MN	II	2486.16	2485.41	10		328		MN	II	2503.275	2502.520	30		328	
MN	II	2486.908	2486.158	100		328		MN	II	2503.44	2502.68	1		328	
MN	II	2487.618	2486.868	8		328		MN	II	2504.213	2503.459	40		328	
MN	II	2487.741	2486.991	60		328		MN	II	2505.126	2504.371	20		328	
MN	II	2487.840	2487.089	20		328		MN	II	2505.606	2504.851	10		328	
MN	II	2488.87	2488.12	5		328		MN	II	2505.84	2505.08	0		328	
MN	II	2488.91	2488.16	40		328		MN	II	2507.225	2506.469	15		328	
MN	II	2488.96	2488.21	10		328		MN	II	2507.65	2506.90	5		328	
MN	II	2489.17	2488.42	10		328		MN	II	2507.782	2507.027	20		328	
MN	II	2489.227	2488.476	50		328		MN	II	2508.353	2507.598	170	45.	328	
MN	II	2489.957	2489.206	10		328		MN	II	2508.45	2507.70	20		328	
MN	II	2490.978	2490.227	15		328		MN	II	2508.568	2507.813	50		328	
MN	II	2491.259	2490.508	20		328		MN	II	2508.858	2508.102	10		328	
MN	II	2491.661	2490.910	70		328		MN	II	2509.531	2508.775	50	45.	328	
MN	II	2491.89	2491.14	10		328		MN	II	2509.740	2508.984	30		328	
MN	II	2492.074	2491.325	12		328		MN	II	2509.995	2509.239	5		328	
MN	II	2492.397	2491.645	0		328		MN	II	2510.094	2509.338	5		328	
MN	II	2492.872	2492.120	15		328		MN	II	2510.13	2509.37	2		328	
MN	II	2493.156	2492.404	10		328		MN	II	2510.373	2509.618	60		328	
MN	II	2493.34	2492.58	0		328		MN	II	2511.216	2510.460	30		328	
MN	II	2493.468	2492.716	40		328		MN	II	2511.250	2510.494	5		328	
MN	II	2494.469	2493.716	10		328		MN	II	2511.411	2510.655	140		328	
MN	II	2494.80	2494.04	10		328		MN	II	2512.096	2511.340	15		328	
MN	II	2495.291	2494.538	20		328		MN	II	2512.612	2511.855	15		328	
MN	II	2496.23	2495.48	5		328		MN	II	2512.661	2511.905	15		328	
MN	II	2496.49	2495.73	30		328		MN	II	2513.429	2512.673	8		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2513.688	2512.932	10		328		MN	II	2523.39	2522.63	20		328	
MN	II	2513.74	2512.98	0		328		MN	II	2523.49	2522.73	25		328	
MN	II	2514.957	2514.200	100		328		MN	II	2523.61	2522.85	1		328	
MN	II	2515.11	2514.35	0		328		MN	II	2523.772	2523.013	100		328	
MN	II	2515.260	2514.503	20		328		MN	II	2523.954	2523.194	80		328	
MN	II	2515.325	2514.567	30		328		MN	II	2524.74	2523.98	30		328	
MN	II	2515.707	2514.950	30	45.	328		MN	II	2525.02	2524.26	2		328	
MN	II	2516.066	2515.309	20		328		MN	II	2525.27	2524.51	20		328	
MN	II	2516.751	2515.994	1		328		MN	II	2525.473	2524.713	30		328	
MN	II	2516.89	2516.13	40	45.	328		MN	II	2525.547	2524.788	2		328	
MN	II	2517.10	2516.34	2		328		MN	II	2525.84	2525.08	5		328	
MN	II	2517.357	2516.599	140	21.	328		MN	II	2526.63	2525.87	2		328	
MN	II	2517.499	2516.742	170	45.	328		MN	II	2526.823	2526.063	20		328	
MN	II	2517.632	2516.875	20		328		MN	II	2527.048	2526.287	20		328	
MN	II	2518.14	2517.38	60	21.	328		MN	II	2527.83	2527.07	20		328	
MN	II	2518.268	2517.509	20		328		MN	II	2528.166	2527.406	60		328	
MN	II	2518.44	2517.67	20	21.	328		MN	II	2528.66	2527.90	5		328	
MN	II	2518.63	2517.87	20		328		MN	II	2528.771	2528.011	100		328	
MN	II	2518.79	2518.03	15		328		MN	II	2529.04	2528.28	10		328	
MN	II	2518.94	2518.18	100		328		MN	II	2529.839	2529.080	40		328	
MN	II	2519.075	2518.317	10		328		MN	II	2530.078	2529.317	1		328	
MN	II	2519.261	2518.503	0		328		MN	II	2530.21	2529.45	5		328	
MN	II	2519.34	2518.58	0		328		MN	II	2530.759	2529.999	20		328	
MN	II	2519.544	2518.786	30		328		MN	II	2531.209	2530.447	15		328	
MN	II	2519.71	2518.95	1		328		MN	II	2531.487	2530.725	140	55.	328	
MN	II	2519.93	2519.17	15		328		MN	II	2532.560	2531.799	140	55.	328	
MN	II	2520.02	2519.26	10		328		MN	II	2532.653	2531.892	100	55.	328	
MN	II	2520.070	2519.312	30		328		MN	II	2533.103	2532.341	20		328	
MN	II	2520.31	2519.55	30		328		MN	II	2533.542	2532.781	220	55.	328	
MN	II	2520.44	2519.68	15		328		MN	II	2533.997	2533.236	30		328	
MN	II	2520.771	2520.011	10		328		MN	II	2534.090	2533.329	220	55.	328	
MN	II	2520.860	2520.102	80		328		MN	II	2534.223	2533.462	80	55.	328	
MN	II	2521.010	2520.252	60		328		MN	II	2534.371	2533.610	25		328	
MN	II	2521.276	2520.518	100		328		MN	II	2534.579	2533.817	8		328	
MN	II	2521.38	2520.62	50		328		MN	II	2534.859	2534.098	170	55.	328	
MN	II	2521.716	2520.958	10		328		MN	II	2534.983	2534.221	280	55.	328	
MN	II	2521.840	2521.081	25		328		MN	II	2535.156	2534.393	80		328	
MN	II	2522.424	2521.665	140		328		MN	II	2535.566	2534.804	15		328	
MN	II	2523.02	2522.26	30		328		MN	II	2535.803	2535.041	60		328	
MN	II	2523.258	2522.499	50		328		MN	II	2536.16	2535.40	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	2536.420	2535.658	320	21.	328		MN	II	2548.662	2547.898	50		328	
MN	II	2536.544	2535.782	30		328		MN	II	2548.730	2547.966	20		328	
MN	II	2536.740	2535.977	170	21.	328		MN	II	2549.022	2548.257	140	47.	328	
MN	II	2536.76	2536.00	100	21.	328		MN	II	2549.14	2548.37	50		328	
MN	II	2538.027	2537.265	3		328		MN	II	2549.515	2548.750	320	55.	328	
MN	II	2538.12	2537.36	40		328		MN	II	2550.082	2549.317	40		328	
MN	II	2538.242	2537.480	8		328		MN	II	2550.378	2549.612	40		328	
MN	II	2538.335	2537.573	40		328		MN	II	2550.583	2549.818	60		328	
MN	II	2538.681	2537.919	320	55.	328		MN	II	2551.092	2550.326	100		328	
MN	II	2538.804	2538.041	220	55.	328		MN	II	2551.28	2550.51	5		328	
MN	II	2539.308	2538.545	10		328		MN	II	2552.12	2551.35	40		328	
MN	II	2539.649	2538.886	60		328		MN	II	2552.30	2551.53	50		328	
MN	II	2539.810	2539.046	40		328		MN	II	2552.366	2551.599	60	47.	328	
MN	II	2540.035	2539.272	80		328		MN	II	2552.617	2551.851	220	32.	328	
MN	II	2540.216	2539.453	15		328		MN	II	2553.039	2552.272	15		328	
MN	II	2540.33	2539.56	15		328		MN	II	2553.73	2552.96	40		328	
MN	II	2540.954	2540.191	100		328		MN	II	2553.924	2553.158	80	32.	328	
MN	II	2541.512	2540.749	140	32.	328		MN	II	2554.033	2553.267	170	55.	328	
MN	II	2541.63	2540.86	15		328		MN	II	2554.742	2553.976	40		328	
MN	II	2541.875	2541.112	220	22.	328		MN	II	2555.284	2554.518	80		328	
MN	II	2541.927	2541.163	140	22.	328		MN	II	2555.68	2554.91	3		328	
MN	II	2542.511	2541.748	20		328		MN	II	2555.88	2555.11	5		328	
MN	II	2542.788	2542.024	40		328		MN	II	2555.94	2555.18	5		328	
MN	II	2543.415	2542.651	100	47.	328		MN	II	2557.340	2556.573	320	20.	328	
MN	II	2543.687	2542.923	280	21.	328		MN	II	2557.661	2556.894	170	20.	328	
MN	II	2543.742	2542.979	140	21.	328		MN	II	2558.310	2557.543	220	20.	328	
MN	II	2544.218	2543.454	320	21.	328		MN	II	2558.361	2557.594	100	20.	328	
MN	II	2544.615	2543.851	40		328		MN	II	2558.477	2557.710	80		328	
MN	II	2544.748	2543.984	80		328		MN	II	2558.634	2557.876	60		328	
MN	II	2544.94	2544.18	20		328		MN	II	2558.86	2558.08	20		328	
MN	II	2545.069	2544.304	100		328		MN	II	2559.072	2558.304	100		328	
MN	II	2545.37	2544.61	0		328		MN	II	2559.372	2558.605	450	20.	328	H
MN	II	2545.919	2545.155	140	47.	328		MN	II	2559.630	2558.963	100		328	
MN	II	2546.820	2546.056	40		328		MN	II	2559.70	2558.93	20		328	
MN	II	2546.96	2546.19	5		328		MN	II	2560.05	2559.27	10		328	
MN	II	2547.464	2546.700	80		328		MN	II	2560.182	2559.413	170	20.	328	
MN	II	2547.95	2547.18	20		328		MN	II	2560.447	2559.679	100	20.	328	
MN	II	2548.07	2547.31	60		328		MN	II	2560.509	2559.741	80	20.	328	
MN	II	2548.24	2547.48	25		328		MN	II	2560.87	2560.10	3		328	
MN	II	2548.426	2547.662	30		328		MN	II	2560.94	2560.17	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2561.24	2560.47	2		328		MN	II	2578.599	2577.827	50	67.	328	
MN	II	2561.53	2560.76	80		328		MN	II	2578.723	2577.951	20		328	
MN	II	2561.749	2560.961	30		328		MN	II	2578.892	2578.120	5	67.	328	
MN	II	2562.04	2561.27	40		328		MN	II	2579.050	2578.278	30	89.	328	
MN	II	2562.180	2561.412	5		328		MN	II	2579.583	2578.811	140	89.	328	
MN	II	2562.310	2561.542	40		328		MN	II	2580.193	2579.420	100		328	
MN	II	2562.61	2561.84	10		328		MN	II	2581.108	2580.335	2		328	
MN	II	2563.033	2562.265	80		328		MN	II	2582.428	2581.655	60		328	
MN	II	2563.251	2562.483	140		328		MN	II	2582.990	2582.216	5		328	
MN	II	2563.89	2563.12	20		328		MN	II	2583.165	2582.395	20		328	
MN	II	2564.019	2563.251	40		328		MN	II	2583.745	2582.972	100		328	
MN	II	2564.411	2563.642	450	20.	328		MN	II	2583.941	2583.168	20		328	
MN	II	2564.612	2563.843	40		328		MN	II	2584.311	2583.538	60		328	
MN	II	2564.885	2564.116	80		328		MN	II	2584.560	2583.787	2		328	
MN	II	2565.15	2564.38	1		328		MN	II	2585.283	2584.510	100		328	
MN	II	2565.22	2564.45	40		328		MN	II	2585.904	2585.130	60	89.	328	
MN	II	2565.986	2565.219	170	20.	328		MN	II	2586.217	2585.444	100	89.	328	
MN	II	2566.480	2565.711	30		328		MN	II	2586.664	2585.890	100	89.	328	
MN	II	2566.804	2566.035	80	20.	328		MN	II	2586.91	2586.13	10		328	
MN	II	2568.58	2567.81	10		328		MN	II	2587.335	2586.561	60		328	
MN	II	2569.00	2568.23	20		328		MN	II	2587.65	2586.88	12		328	
MN	II	2569.079	2568.309	50		328		MN	II	2588.07	2587.30	80		328	
MN	II	2569.285	2568.515	100	67.	328		MN	II	2588.279	2587.505	50		328	
MN	II	2569.495	2568.725	80		328		MN	II	2588.372	2587.598	100		328	
MN	II	2570.095	2569.325	50		328		MN	II	2588.54	2587.76	10		328	
MN	II	2570.861	2570.091	50		328		MN	II	2588.59	2587.81	1		328	
MN	II	2571.34	2570.57	15		328		MN	II	2588.855	2588.080	40		328	
MN	II	2571.693	2570.923	50		328		MN	II	2588.962	2588.187	5		328	
MN	II	2571.724	2570.954	80		328		MN	II	2589.746	2588.972	170		328	
MN	II	2571.89	2571.12	20		328		MN	II	2590.20	2589.42	10		328	
MN	II	2572.662	2571.892	100	67.	328		MN	II	2590.500	2589.727	220	54.	328	
MN	II	2572.795	2572.023	20		328		MN	II	2590.59	2589.82	20	89.	328	
MN	II	2573.12	2572.32	10		328		MN	II	2590.767	2589.992	60	89.	328	
MN	II	2573.200	2572.430	60		328		MN	II	2590.925	2590.150	140		328	
MN	II	2574.949	2574.178	60		328		MN	II	2591.074	2590.299	50	89.	328	
MN	II	2575.24	2574.47	2		328		MN	II	2591.444	2590.669	40		328	
MN	II	2575.446	2574.675	20		328		MN	II	2592.018	2591.243	60		328	
MN	II	2576.877	2576.105	1000	1.	328	H	MN	II	2592.203	2591.429	100	36.	328	
MN	II	2576.956	2576.183	80		328		MN	II	2592.608	2591.833	5		328	
MN	II	2577.452	2576.660	20		328		MN	II	2592.818	2592.043	20		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2593.182	2592.407	15		328		MN	II	2606.894	2606.116	8	32.	328	
MN	II	2594.076	2593.301	155		328		MN	II	2607.039	2606.260	40		328	
MN	II	2594.36	2593.59	P	36.	328		MN	II	2607.384	2606.604	40		328	
MN	II	2594.499	2593.724	320	1.	328	H	MN	II	2607.620	2606.842	40		328	
MN	II	2594.98	2594.20	10		328		MN	II	2608.067	2607.288	30		328	
MN	II	2595.171	2594.396	20	54.	328		MN	II	2608.637	2607.858	15		328	
MN	II	2595.313	2594.537	30	54.	328		MN	II	2609.225	2608.446	80		328	
MN	II	2595.509	2594.733	100	36.	328		MN	II	2609.593	2608.814	100		328	
MN	II	2596.429	2595.653	40		328		MN	II	2609.91	2609.13	2		328	
MN	II	2597.521	2596.745	60	36.	328		MN	II	2610.22	2609.44	10		328	
MN	II	2597.615	2596.839	30		328		MN	II	2610.337	2609.558	100		328	
MN	II	2598.292	2597.516	30		328		MN	II	2610.980	2610.200	1000	19.	328	H
MN	II	2598.352	2597.576	5		328		MN	II	2611.364	2610.562	60		328	
MN	II	2599.025	2598.248	30		328		MN	II	2611.632	2610.852	60		328	
MN	II	2599.196	2598.420	80		328		MN	II	2612.52	2611.74	1		328	
MN	II	2599.59	2598.81	40		328		MN	II	2613.41	2612.63	60		328	
MN	II	2599.682	2598.905	220	54.	328		MN	II	2614.21	2613.43	15		328	
MN	II	2599.807	2599.030	60	54.	328		MN	II	2614.570	2613.789	40		328	
MN	II	2600.331	2599.553	40		328		MN	II	2614.817	2614.036	40		328	
MN	II	2600.57	2599.79	10		328		MN	II	2614.942	2614.161	40		328	
MN	II	2601.060	2600.283	60	54.	328		MN	II	2615.16	2614.38	5		328	
MN	II	2601.26	2600.48	2		328		MN	II	2616.480	2615.699	30		328	
MN	II	2601.373	2600.596	0		328		MN	II	2617.302	2616.521	100	19.	328	
MN	II	2601.910	2601.132	20		328		MN	II	2617.52	2616.74	10		328	
MN	II	2602.298	2601.520	100	54.	328		MN	II	2617.715	2616.934	20		328	
MN	II	2602.623	2601.844	50		328		MN	II	2618.238	2617.456	100		328	
MN	II	2602.765	2601.968	50		328		MN	II	2618.416	2617.636	50		328	
MN	II	2602.98	2602.20	10		328		MN	II	2618.930	2618.145	700	19.	328	
MN	II	2603.13	2602.35	15		328		MN	II	2619.701	2618.920	40		328	
MN	II	2603.220	2602.442	10		328		MN	II	2619.784	2619.003	40		328	
MN	II	2603.503	2602.725	170		328		MN	II	2620.093	2619.311	40		328	
MN	II	2603.813	2603.035	60	54.	328		MN	II	2621.027	2620.245	30		328	
MN	II	2603.921	2603.143	20		328		MN	II	2622.082	2621.300	50		328	
MN	II	2604.047	2603.269	40		328		MN	II	2622.51	2621.73	1		328	
MN	II	2604.498	2603.720	170	36.	328		MN	II	2623.62	2622.74	20		328	
MN	II	2604.63	2603.86	12		328		MN	II	2623.88	2623.10	5	19.	328	
MN	II	2604.902	2604.124	15		328		MN	II	2624.407	2623.624	20		328	
MN	II	2605.093	2604.315	18		328		MN	II	2624.830	2624.047	0		328	
MN	II	2605.167	2604.389	30		328		MN	II	2625.544	2624.761	40	19.	328	
MN	II	2606.460	2605.682	320	1.	328	H	MN	II	2625.739	2624.956	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2625.833	2625.050	5		328		MN	II	2643.30	2642.51	10		328	
MN	II	2625.957	2625.174	40		328		MN	II	2643.563	2642.775	40		328	
MN	II	2626.388	2625.606	550	19.	328		MN	II	2643.852	2643.065	50		328	
MN	II	2626.68	2625.90	20		328		MN	II	2644.543	2643.756	50		328	
MN	II	2626.90	2626.12	30		328		MN	II	2644.68	2643.89	20		328	
MN	II	2627.251	2626.468	60		328		MN	II	2644.85	2644.06	20		328	
MN	II	2627.841	2627.058	40		328		MN	II	2644.91	2644.12	5		328	
MN	II	2628.942	2628.158	20		328		MN	II	2646.78	2645.99	20		328	
MN	II	2629.076	2628.293	80		328		MN	II	2648.10	2647.31	2		328	
MN	II	2629.289	2628.505	30		328		MN	II	2648.412	2647.624	80	53.	328	
MN	II	2629.552	2628.768	30		328		MN	II	2648.600	2647.811	40		328	
MN	II	2630.024	2629.239	20		328		MN	II	2648.846	2648.056	80		328	
MN	II	2630.338	2629.554	60		328		MN	II	2649.129	2648.339	20		328	
MN	II	2630.80	2630.02	10		328		MN	II	2649.43	2648.64	20		328	
MN	II	2631.93	2631.15	10	19.	328		MN	II	2649.728	2648.938	100	53.	328	
MN	II	2632.556	2631.771	30		328		MN	II	2649.87	2649.08	5		328	
MN	II	2632.791	2632.006	140	19.	328		MN	II	2650.213	2649.424	30		328	
MN	II	2633.139	2632.354	450	19.	328	H	MN	II	2651.789	2651.000	80		328	
MN	II	2633.760	2632.975	20		328		MN	II	2651.826	2651.036	80	52.	328	
MN	II	2633.870	2633.085	10		328		MN	II	2652.657	2651.868	40		328	
MN	II	2634.119	2633.334	40		328		MN	II	2653.286	2652.497	140	53.	328	
MN	II	2634.53	2633.75	2		328		MN	II	2653.96	2653.17	1		328	
MN	II	2634.580	2633.795	30		328		MN	II	2654.361	2653.571	60		328	
MN	II	2636.390	2635.604	0		328		MN	II	2655.21	2654.42	10		328	
MN	II	2636.63	2635.84	5		328		MN	II	2655.415	2654.625	20		328	
MN	II	2636.99	2636.20	20		328		MN	II	2656.611	2655.820	40		328	
MN	II	2637.454	2636.668	40		328		MN	II	2656.714	2655.924	170	52.	328	
MN	II	2637.948	2637.173	80		328		MN	II	2656.961	2656.170	140	70.	328	
MN	II	2638.675	2637.889	100		328		MN	II	2657.11	2656.32	30		328	
MN	II	2638.91	2638.13	5	19.	328		MN	II	2659.881	2659.090	80		328	
MN	II	2638.959	2638.173	320	19.	328	H	MN	II	2660.061	2659.270	50		328	
MN	II	2639.353	2638.567	80		328		MN	II	2660.73	2659.94	20		328	
MN	II	2639.486	2638.700	60		328		MN	II	2661.083	2660.292	40		328	
MN	II	2639.61	2638.82	15		328		MN	II	2661.20	2660.41	3		328	
MN	II	2639.815	2639.029	20		328		MN	II	2661.413	2660.621	40		328	
MN	II	2640.006	2639.220	15		328		MN	II	2661.54	2660.75	0		328	
MN	II	2640.51	2639.72	20		328		MN	II	2661.63	2660.84	5		328	
MN	II	2640.636	2639.849	170	52.	328		MN	II	2661.80	2661.01	2		328	
MN	II	2642.20	2641.41	3		328		MN	II	2661.93	2661.14	10		328	
MN	II	2643.022	2642.235	40		328		MN	II	2662.22	2661.42	2		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2662.55	2661.76	5		328		MN	II	2678.044	2677.249	100		328	
MN	II	2662.76	2661.97	40	52.	328		MN	II	2678.31	2677.51	5		328	
MN	II	2662.790	2661.998	3		328		MN	II	2678.647	2677.851	140	52.	328	
MN	II	2663.330	2662.538	140	70.	328		MN	II	2679.349	2678.553	50		328	
MN	II	2663.56	2662.76	4		328		MN	II	2679.962	2679.166	140	52.	328	
MN	II	2663.57	2662.78	15		328		MN	II	2680.313	2679.517	30		328	
MN	II	2664.53	2663.74	25		328		MN	II	2680.743	2679.947	100		328	
MN	II	2664.828	2664.035	100		328		MN	II	2681.134	2680.338	220	63.	328	
MN	II	2665.26	2664.47	10		328		MN	II	2681.17	2680.38	40		328	
MN	II	2665.972	2665.179	80	62.	328		MN	II	2681.477	2680.681	170		328	
MN	II	2666.89	2666.10	20		328		MN	II	2681.565	2680.769	40	52.	328	
MN	II	2667.17	2666.38	40		328		MN	II	2682.049	2681.252	70		328	
MN	II	2667.562	2666.769	170		328		MN	II	2682.509	2681.712	30	63.	328	
MN	II	2667.687	2666.894	50	52.	328		MN	II	2683.166	2682.368	80	63.	328	
MN	II	2667.823	2667.030	170		328		MN	II	2683.296	2682.499	30	63.	328	
MN	II	2668.008	2667.215	10		328		MN	II	2684.28	2683.48	1		328	
MN	II	2668.186	2667.393	30		328		MN	II	2684.630	2683.833	100	62.	328	
MN	II	2668.476	2667.683	20		328		MN	II	2685.337	2684.539	170	63.	328	
MN	II	2668.640	2667.849	60		328		MN	II	2685.75	2684.95	10		328	
MN	II	2668.97	2668.25	15		328		MN	II	2685.91	2685.13	50	44.	328	
MN	II	2669.422	2668.629	30		328		MN	II	2686.48	2685.68	2		328	
MN	II	2670.121	2669.328	80		328		MN	II	2686.662	2685.883	100	44.	328	
MN	II	2670.390	2669.605	50		328		MN	II	2686.780	2685.983	40	62.	328	
MN	II	2671.85	2671.06	8		328		MN	II	2687.10	2686.30	3		328	
MN	II	2671.89	2671.10	10		328		MN	II	2687.42	2686.62	20		328	
MN	II	2672.30	2671.51	0		328		MN	II	2688.166	2687.368	30		328	
MN	II	2672.605	2671.811	80		328		MN	II	2688.255	2687.457	20		328	
MN	II	2673.375	2672.581	320	34.	328		MN	II	2688.68	2687.88	5		328	
MN	II	2673.890	2673.095	40		328		MN	II	2688.79	2687.99	2		328	
MN	II	2674.174	2673.379	140	52.	328		MN	II	2689.045	2688.247	140		328	
MN	II	2675.235	2674.440	220	63.	328		MN	II	2689.14	2688.34	5		328	
MN	II	2675.552	2674.756	100		328		MN	II	2690.584	2689.787	100	44.	328	
MN	II	2675.652	2674.858	30	52.	328		MN	II	2691.04	2690.24	3		328	
MN	II	2675.780	2674.985	140	52.	328		MN	II	2691.195	2690.396	30		328	
MN	II	2675.925	2675.130	30		328		MN	II	2691.65	2690.85	20		328	
MN	II	2676.313	2675.517	80		328		MN	II	2691.777	2690.978	100		328	
MN	II	2676.64	2675.85	10		328		MN	II	2691.99	2691.19	20		328	
MN	II	2677.244	2676.450	20		328		MN	II	2692.05	2691.25	10		328	
MN	II	2677.373	2676.578	40		328		MN	II	2692.516	2691.717	80		328	
MN	II	2677.551	2676.756	40		328		MN	II	2692.780	2691.981	140		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	2693.249	2692.450	100		328		MN	II	2704.847	2704.045	20	103.	328	
MN	II	2693.463	2692.665	4		328		MN	II	2705.00	2704.20	20		328	
MN	II	2693.84	2693.04	20		328		MN	II	2705.123	2704.321	5		328	
MN	II	2693.91	2693.11	60		328		MN	II	2705.39	2704.59	8		328	
MN	II	2693.991	2693.192	220	34.	328		MN	II	2705.83	2705.03	30		328	
MN	II	2694.185	2693.387	5		328		MN	II	2706.364	2705.561	140	34.	328	
MN	II	2694.369	2693.570	100	44.	328		MN	II	2706.534	2705.732	320	18.	328	H
MN	II	2694.63	2693.83	15		328		MN	II	2706.895	2706.094	20	34.	328	
MN	II	2694.901	2694.102	100		328		MN	II	2707.435	2706.631	140	18.	328	
MN	II	2695.847	2695.046	60		328		MN	II	2707.70	2706.90	15		328	
MN	II	2696.166	2695.365	220	34.	328		MN	II	2708.346	2707.544	220	18.	328	
MN	II	2696.39	2695.59	5		328		MN	II	2708.717	2707.915	20	103.	328	
MN	II	2696.752	2695.951	50		328		MN	II	2709.253	2708.452	320	18.	328	H
MN	II	2697.780	2696.979	30		328		MN	II	2709.520	2708.719	8		328	
MN	II	2697.995	2697.195	20		328		MN	II	2709.617	2708.814	140	18.	328	
MN	II	2698.31	2697.51	10		328		MN	II	2709.87	2709.06	5		328	
MN	II	2699.32	2698.52	10		328		MN	II	2710.420	2709.617	60		328	
MN	II	2699.426	2698.626	5	103.	328		MN	II	2710.774	2709.970	170	18.	328	
MN	II	2699.531	2698.730	10	103.	328		MN	II	2711.140	2710.336	320	18.	328	H
MN	II	2699.788	2698.989	170	35.	328		MN	II	2711.195	2710.392	140	18.	328	
MN	II	2700.37	2699.57	40	34.	328		MN	II	2711.433	2710.629	140		328	
MN	II	2700.652	2699.853	30	103.	328		MN	II	2711.925	2711.123	5		328	
MN	II	2700.75	2699.95	4	103.	329		MN	II	2712.370	2711.568	100	18.	328	
MN	II	2700.811	2700.011	10	103.	328		MN	II	2712.432	2711.630	320	18.	328	
MN	II	2701.089	2700.296	10		328		MN	II	2714.64	2713.83	30		328	
MN	II	2701.18	2700.38	30		328		MN	II	2714.72	2713.91	5		328	
MN	II	2701.527	2700.673	30		328		MN	II	2715.387	2714.584	10		328	
MN	II	2701.826	2701.024	170	34.	328		MN	II	2715.541	2714.737	30		328	
MN	II	2701.972	2701.170	220	35.	328		MN	II	2715.79	2714.98	40		328	
MN	II	2702.329	2701.530	20	103.	328		MN	II	2716.26	2715.45	1		328	
MN	II	2702.500	2701.698	450	18.	328	H	MN	II	2716.504	2715.699	50		328	
MN	II	2703.03	2702.23	5	103.	328		MN	II	2716.843	2716.038	30		328	
MN	II	2703.79	2702.94	30		328		MN	II	2716.95	2716.14	1		328	
MN	II	2703.85	2703.04	5		328		MN	II	2717.24	2716.43	5		328	
MN	II	2704.02	2703.22	30	34.	328		MN	II	2717.602	2716.796	170	33.	328	
MN	II	2704.15	2703.34	2	103.	328		MN	II	2717.797	2716.993	5		328	
MN	II	2704.255	2703.453	40	18.	328		MN	II	2718.332	2717.527	170	33.	328	
MN	II	2704.30	2703.50	20	35.	328		MN	II	2719.18	2718.37	30		328	
MN	II	2704.562	2703.760	50	34.	328		MN	II	2719.585	2718.779	30		328	
MN	II	2704.78	2703.98	320	18.	328	H	MN	II	2719.818	2719.012	170	33.	328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2720.113	2719.307	140		328		MN	II	2747.42	2746.61	10		328	
MN	II	2720.548	2719.743	220	33.	328		MN	II	2748.132	2747.320	80		328	
MN	II	2720.701	2719.895	100		328		MN	II	2748.65	2747.84	10		328	
MN	II	2720.810	2720.003	140	33.	328		MN	II	2748.771	2747.956	60		328	
MN	II	2721.341	2720.534	20		328		MN	II	2749.04	2748.23	10		328	
MN	II	2722.138	2721.333	10		328		MN	II	2749.511	2748.698	60		328	
MN	II	2722.464	2721.660	10		328		MN	II	2750.37	2749.56	1		328	
MN	II	2722.902	2722.097	170	33.	328		MN	II	2750.503	2749.689	40		328	
MN	II	2723.060	2722.254	20		328		MN	II	2750.939	2750.126	140	46.	328	
MN	II	2724.96	2724.15	30		328		MN	II	2752.410	2751.597	80		328	
MN	II	2725.272	2724.465	170	33.	328		MN	II	2752.77	2751.96	15		328	
MN	II	2726.36	2725.55	15		328		MN	II	2753.23	2752.42	15		328	
MN	II	2726.739	2725.932	140		328		MN	II	2754.000	2753.186	40		328	
MN	II	2727.801	2726.994	60		328		MN	II	2754.271	2753.457	40		328	
MN	II	2728.392	2727.584	140		328		MN	II	2754.801	2753.987	50		328	
MN	II	2728.882	2728.075	50		328		MN	II	2755.016	2754.203	80	46.	328	
MN	II	2729.425	2728.617	170		328		MN	II	2755.265	2754.451	30		328	
MN	II	2729.670	2728.862	20		328		MN	II	2756.82	2756.01	1		328	
MN	II	2730.420	2729.614	20		328		MN	II	2756.995	2756.180	30		328	
MN	II	2731.667	2730.861	10		328		MN	II	2757.144	2756.330	40		328	
MN	II	2732.494	2731.686	50		328		MN	II	2758.33	2757.51	1		328	
MN	II	2733.94	2733.13	30		328		MN	II	2758.75	2757.93	30		328	
MN	II	2734.703	2733.894	50		328		MN	II	2758.892	2758.076	80		328	
MN	II	2735.260	2734.473	30		328		MN	II	2759.04	2758.22	10		328	
MN	II	2737.22	2736.41	5		328		MN	II	2759.26	2758.44	80		328	
MN	II	2737.831	2737.022	40		328		MN	II	2760.250	2759.432	20		328	
MN	II	2737.932	2737.121	40		328		MN	II	2760.76	2759.94	1		328	
MN	II	2738.381	2737.570	80		328		MN	II	2761.13	2760.31	100		328	
MN	II	2739.108	2738.298	30		328		MN	II	2761.74	2760.92	100		328	
MN	II	2740.65	2739.84	3		328		MN	II	2761.823	2761.006	100		328	
MN	II	2741.03	2740.22	30		328		MN	II	2762.027	2761.213	0		328	
MN	II	2741.597	2740.786	100		328		MN	II	2762.131	2761.315	40	46.	328	
MN	II	2741.75	2740.94	10		328		MN	II	2762.904	2762.088	140	73.	328	
MN	II	2742.11	2741.30	0		328		MN	II	2763.37	2762.55	60		328	
MN	II	2743.278	2742.467	20		328		MN	II	2763.51	2762.69	1		328	
MN	II	2743.992	2743.180	80		328		MN	II	2763.989	2763.172	60		328	
MN	II	2745.715	2744.902	80		328		MN	II	2764.469	2763.653	60		328	
MN	II	2746.310	2745.498	60		328		MN	II	2764.576	2763.760	20		328	
MN	II	2746.544	2745.732	60		328		MN	II	2764.802	2763.987	30		328	
MN	II	2746.935	2746.124	8		328		MN	II	2764.90	2764.08	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	2765.783	2764.966	40		328		MN	II	2779.816	2778.996	100	72.	328	
MN	II	2766.249	2765.434	100	46.	328		MN	II	2780.57	2779.75	8		328	
MN	II	2766.469	2765.652	60		328		MN	II	2781.03	2780.21	20		328	
MN	II	2767.584	2766.767	30		328		MN	II	2782.216	2781.397	50		328	
MN	II	2768.624	2767.806	40		328		MN	II	2782.37	2781.55	1		328	
MN	II	2768.627	2767.810	30		328		MN	II	2782.620	2781.798	30	72.	328	
MN	II	2768.75	2767.93	60		328		MN	II	2782.753	2781.932	30	104.	328	
MN	II	2769.275	2768.456	170	83.	328		MN	II	2782.966	2782.145	100	72.	328	
MN	II	2769.43	2768.61	1		328		MN	II	2784.387	2783.566	30		328	
MN	II	2769.53	2768.71	1		328		MN	II	2785.030	2784.208	140	83.	328	
MN	II	2769.677	2768.859	60	83.	328		MN	II	2785.27	2784.45	10		328	
MN	II	2769.72	2768.90	40	46.	328		MN	II	2785.865	2785.043	100	65.	328	
MN	II	2770.133	2769.317	40		328		MN	II	2786.052	2785.230	100	83.	328	
MN	II	2770.458	2769.640	100		328		MN	II	2787.278	2786.455	50		328	
MN	II	2770.679	2769.860	40	83.	328		MN	II	2787.58	2786.76	2		328	
MN	II	2771.853	2771.035	40		328		MN	II	2787.60	2786.78	2		328	
MN	II	2772.346	2771.527	40		328		MN	II	2787.73	2786.91	2		328	
MN	II	2772.71	2771.89	0		328		MN	II	2787.89	2787.07	10		328	
MN	II	2772.91	2772.09	20		328		MN	II	2788.43	2787.61	15		328	
MN	II	2772.945	2772.126	30		328		MN	II	2789.20	2788.38	3		328	
MN	II	2773.14	2772.32	2		328		MN	II	2789.85	2789.03	2		328	
MN	II	2773.43	2772.61	8		328		MN	II	2790.127	2789.304	30	104.	328	
MN	II	2773.862	2773.043	80	46.	328		MN	II	2790.21	2789.39	15		328	
MN	II	2774.20	2773.38	15		328		MN	II	2790.805	2789.982	100	72.	328	
MN	II	2775.02	2774.20	15		328		MN	II	2790.88	2790.06	5	104.	328	
MN	II	2775.247	2774.427	30		328		MN	II	2791.693	2790.868	10		328	
MN	II	2775.67	2774.85	10		328		MN	II	2792.005	2791.180	30		328	
MN	II	2775.798	2774.978	60		328		MN	II	2792.91	2792.09	4		328	
MN	II	2776.138	2775.319	20		328		MN	II	2794.041	2793.218	20		328	
MN	II	2776.202	2775.383	30		328		MN	II	2794.533	2793.709	30		328	
MN	II	2776.33	2775.51	10		328		MN	II	2795.988	2795.163	100	66.	328	
MN	II	2776.471	2775.652	140	73.	328		MN	II	2796.34	2795.52	5		328	
MN	II	2776.65	2775.83	10		328		MN	II	2796.647	2795.822	5		328	
MN	II	2776.949	2776.131	5		328		MN	II	2796.941	2796.117	80	73.	328	
MN	II	2777.343	2776.523	100	46.	328		MN	II	2798.249	2797.424	30		328	
MN	II	2777.98	2777.16	20		328		MN	II	2798.40	2797.58	40	104.	328	
MN	II	2778.204	2777.384	30		328		MN	II	2800.09	2799.26	5	104.	328	
MN	II	2778.597	2777.776	80		328		MN	II	2800.89	2800.06	3		328	
MN	II	2779.04	2778.22	5		328		MN	II	2800.99	2800.17	4		328	
MN	II	2779.63	2778.81	5		328		MN	II	2801.25	2800.42	8		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
MN	II	2802.829	2802.003	20	51.	328		MN	II	2818.151	2817.320	80		328	
MN	II	2804.064	2803.238	20		328		MN	II	2818.555	2817.725	30		328	
MN	II	2804.178	2803.352	10		328		MN	II	2818.78	2817.94	30		328	
MN	II	2804.269	2803.443	30	51.	328		MN	II	2820.813	2819.983	10	110.	328	
MN	II	2805.54	2804.71	4		328		MN	II	2822.675	2821.843	50		328	
MN	II	2806.034	2805.204	50	51.	328		MN	II	2822.888	2822.056	40		328	
MN	II	2806.191	2805.364	100	66.	328		MN	II	2823.376	2822.545	15	110.	328	
MN	II	2806.87	2806.04	5		328		MN	II	2825.504	2824.673	60		328	
MN	II	2807.342	2806.515	40	104.	328		MN	II	2825.971	2825.138	3	110.	328	
MN	II	2807.656	2806.828	40	66.	328		MN	II	2827.110	2826.281	10	110.	328	
MN	II	2807.726	2806.899	20		328		MN	II	2829.299	2828.468	30		328	
MN	II	2808.347	2807.520	30		328		MN	II	2829.48	2828.65	2		328	
MN	II	2808.413	2807.585	50	66.	328		MN	II	2829.663	2828.838	12	110.	328	
MN	II	2809.42	2808.59	5		328		MN	II	2829.800	2828.967	20		328	
MN	II	2810.020	2809.192	100	65.	328		MN	II	2830.14	2829.30	5		328	
MN	II	2810.216	2809.389	50		328		MN	II	2830.99	2830.16	2		328	
MN	II	2810.489	2809.661	30		328		MN	II	2831.306	2830.473	60		328	
MN	II	2810.64	2809.81	10		328		MN	II	2831.554	2830.720	80		328	
MN	II	2810.75	2809.92	1		328		MN	II	2831.679	2830.848	30		328	
MN	II	2810.83	2810.00	0		328		MN	II	2831.748	2830.914	20		328	
MN	II	2811.076	2810.247	80	71.	328		MN	II	2834.687	2833.853	30		328	
MN	II	2811.71	2810.88	20		328		MN	II	2835.460	2834.626	5		328	
MN	II	2812.111	2811.283	80	51.	328		MN	II	2836.15	2835.32	0		328	
MN	II	2812.264	2811.436	50	51.	328		MN	II	2836.319	2835.485	40		328	
MN	II	2812.32	2811.49	20		328		MN	II	2838.39	2837.56	30		328	
MN	II	2812.797	2811.970	10	110.	328		MN	II	2839.543	2838.707	40		328	
MN	II	2813.092	2812.264	100	71.	328		MN	II	2840.33	2839.50	0		328	
MN	II	2813.16	2812.33	40	71.	328		MN	II	2841.191	2840.355	80		328	
MN	II	2813.35	2812.52	40	71.	328		MN	II	2843.44	2842.61	5		328	
MN	II	2813.417	2812.588	100	71.	328		MN	II	2845.081	2844.246	30		328	
MN	II	2813.54	2812.71	20		328		MN	II	2845.386	2844.550	20		328	
MN	II	2813.605	2812.776	30	66.	328		MN	II	2845.73	2844.89	10		328	
MN	II	2813.949	2813.119	50	71.	328		MN	II	2846.17	2845.33	10		328	
MN	II	2815.387	2814.561	10	110.	328		MN	II	2846.683	2845.846	20		328	
MN	II	2815.48	2814.66	20		328		MN	II	2846.873	2846.036	100		328	
MN	II	2815.62	2814.79	10		328		MN	II	2847.717	2846.879	20		328	
MN	II	2815.854	2815.025	170	66.	328		MN	II	2850.782	2849.945	15		328	
MN	II	2817.157	2816.329	170	51.	328		MN	II	2852.023	2851.185	80		328	
MN	II	2817.236	2816.408	6		328		MN	II	2852.39	2851.55	20		328	
MN	II	2817.455	2816.625	40		328		MN	II	2852.798	2851.957	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2853.608	2852.769	3		328		MN	II	2872.521	2871.677	30	106	328	
MN	II	2854.207	2853.369	30		328		MN	II	2873.243	2872.400	40	69.	328	
MN	II	2854.980	2854.142	20		328		MN	II	2873.779	2872.935	170		328	
MN	II	2855.15	2854.31	40		328		MN	II	2873.971	2873.128	30	108.	328	
MN	II	2855.853	2855.014	40		328		MN	II	2874.13	2873.29	0	108.	328	
MN	II	2856.040	2855.200	50		328		MN	II	2874.441	2873.598	20		328	
MN	II	2857.080	2856.240	40		328		MN	II	2874.59	2873.75	4		328	
MN	II	2857.866	2857.027	50		328		MN	II	2874.77	2873.93	0		328	
MN	II	2858.843	2858.002	20		328		MN	II	2875.686	2874.842	30		328	
MN	II	2860.50	2859.65	20		328		MN	II	2876.040	2875.196	0		328	
MN	II	2860.67	2859.83	1	106.	328		MN	II	2876.274	2875.430	40		328	
MN	II	2860.84	2859.99	1		328		MN	II	2876.637	2875.793	20		328	
MN	II	2861.469	2860.628	20	106.	328		MN	II	2877.176	2876.331	10		328	
MN	II	2862.09	2861.25	0		328		MN	II	2880.22	2879.37	1		328	
MN	II	2862.143	2861.303	30	109.	328		MN	II	2880.327	2879.482	220	61.	328	
MN	II	2862.380	2861.540	50	108.	328		MN	II	2880.692	2879.847	100	69.	328	
MN	II	2862.864	2862.023	2		328		MN	II	2880.78	2879.94	3		328	
MN	II	2863.229	2862.408	40	106.	328		MN	II	2881.256	2880.410	10		328	
MN	II	2863.66	2862.82	15		328		MN	II	2881.604	2880.758	12		328	
MN	II	2864.06	2863.21	5		328		MN	II	2881.968	2881.122	80		328	
MN	II	2864.46	2863.62	0		328		MN	II	2882.89	2882.04	0		328	
MN	II	2864.549	2863.707	15		328		MN	II	2883.494	2882.648	5		328	
MN	II	2865.646	2864.804	50		328		MN	II	2884.671	2883.825	100	69.	328	
MN	II	2865.853	2865.012	1	109.	328		MN	II	2885.009	2884.162	80	60.	328	
MN	II	2866.020	2865.182	40	109.	328		MN	II	2885.154	2884.307	3		328	
MN	II	2866.44	2865.60	10		328		MN	II	2885.53	2884.68	5		328	
MN	II	2867.18	2866.34	30		328		MN	II	2885.979	2885.131	125	69.	328	
MN	II	2867.36	2866.52	30		328		MN	II	2886.30	2885.46	2		328	
MN	II	2868.45	2867.61	0		328		MN	II	2886.429	2885.583	10		328	
MN	II	2868.831	2867.989	40	108.	328		MN	II	2886.56	2885.71	2		328	
MN	II	2868.937	2868.095	10	106.	328		MN	II	2886.66	2885.82	0		328	
MN	II	2869.00	2868.17	5	106.	328		MN	II	2886.79	2885.95	2		328	
MN	II	2869.740	2868.898	40	106.	328		MN	II	2886.96	2886.11	0		328	
MN	II	2870.094	2869.252	50		328		MN	II	2887.18	2886.34	3		328	
MN	II	2870.463	2869.620	40	109.	328		MN	II	2887.518	2886.671	220	60.	328	
MN	II	2870.73	2869.89	8		328		MN	II	2888.735	2887.888	100	61.	328	
MN	II	2870.929	2870.085	220		328		MN	II	2889.090	2888.243	30		328	
MN	II	2871.523	2870.680	15	106.	328		MN	II	2889.662	2888.815	15	107.	328	
MN	II	2871.662	2870.818	50	106.	328		MN	II	2890.157	2889.312	0	107.	328	
MN	II	2872.371	2871.527	40	109.	328		MN	II	2890.27	2889.42	0	107.	328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2890.367	2889.520	220	60.	328	H	MN	II	2923.63	2922.78	0		328	
MN	II	2890.447	2889.600	220	60.	328	H	MN	II	2924.48	2923.63	0		328	
MN	II	2891.500	2890.652	20		328		MN	II	2924.72	2923.87	1		328	
MN	II	2892.180	2891.332	140	69.	328		MN	II	2926.73	2925.88	50		328	
MN	II	2892.489	2891.643	5		328		MN	II	2927.419	2926.563	50		328	
MN	II	2892.61	2891.76	5		328		MN	II	2928.088	2927.230	40	50.	328	
MN	II	2893.236	2892.389	220	61.	328		MN	II	2928.252	2927.395	100	50.	328	
MN	II	2893.629	2892.781	10		328		MN	II	2928.451	2927.596	20		328	
MN	II	2894.689	2893.840	40		328		MN	II	2928.510	2927.652	20		328	
MN	II	2895.751	2894.901	100	61.	328		MN	II	2929.117	2928.260	10		328	
MN	II	2897.917	2897.068	140	50.	328		MN	II	2930.758	2929.903	0		328	
MN	II	2899.18	2898.33	5	107.	328		MN	II	2931.251	2930.393	5	111.	328	
MN	II	2899.319	2898.531	1	107.	328		MN	II	2931.377	2930.520	60.		328	
MN	II	2899.551	2898.702	220	61.	328		MN	II	2932.73	2931.87	3		328	
MN	II	2899.810	2898.960	40		328		MN	II	2933.239	2932.305	40		328	
MN	II	2901.004	2900.154	170	69.	328		MN	II	2933.912	2933.054	450	5.	328	H
MN	II	2901.19	2900.34	5		328		MN	II	2934.238	2933.379	8	111.	328	
MN	II	2901.740	2900.890	20		328		MN	II	2934.637	2933.779	80	50.	328	
MN	II	2902.91	2902.06	20		328		MN	II	2934.926	2934.069	20		328	
MN	II	2903.751	2902.901	100	50.	328		MN	II	2935.281	2934.422	80	68.	328	
MN	II	2904.856	2904.005	0		328		MN	II	2935.582	2934.723	100	50.	328	
MN	II	2905.366	2904.515	20		328		MN	II	2936.214	2935.355	60	50.	328	
MN	II	2905.516	2904.665	40		328		MN	II	2937.25	2936.39	1		328	
MN	II	2906.104	2905.253	40		328		MN	II	2937.38	2936.52	5	50.	328	
MN	II	2907.02	2906.17	3		328		MN	II	2937.629	2936.770	30		328	
MN	II	2907.415	2906.564	3		328		MN	II	2937.776	2936.918	5		328	
MN	II	2907.847	2906.994	15		328		MN	II	2938.565	2937.706	100		328	
MN	II	2908.06	2907.21	3		328		MN	II	2938.889	2938.030	10		328	
MN	II	2913.65	2912.80	0		328		MN	II	2940.172	2939.312	550	5.	328	H
MN	II	2913.98	2913.13	60		328		MN	II	2942.427	2941.567	80		328	
MN	II	2914.330	2913.481	15		328		MN	II	2942.921	2942.060	20		328	
MN	II	2914.578	2913.724	30	111.	328		MN	II	2943.148	2942.287	2		328	
MN	II	2915.803	2914.953	2	112.	328		MN	II	2943.551	2942.691	30	82.	328	
MN	II	2916.306	2915.454	3	112.	328		MN	II	2943.614	2942.735	40	82.	328	
MN	II	2917.002	2916.150	4	112.	328		MN	II	2943.999	2943.139	140	82.	328	
MN	II	2917.923	2917.071	4	112.	328		MN	II	2944.389	2943.528	5		328	
MN	II	2919.430	2918.576	10		328		MN	II	2944.755	2943.894	140	82.	328	
MN	II	2920.180	2919.324	5		328		MN	II	2944.92	2944.06	20	68.	328	
MN	II	2922.154	2921.299	40	50.	328		MN	II	2946.15	2945.29	20		328	
MN	II	2923.449	2922.594	100		328		MN	II	2946.723	2945.862	30		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	2947.301	2946.439	5		328		MN	II	2973.491	2972.623	40		328	
MN	II	2950.066	2949.204	700	5.	328	H	MN	II	2974.09	2973.23	1		328	
MN	II	2952.031	2951.168	140	82.	328		MN	II	2974.177	2973.308	20		328	
MN	II	2952.423	2951.560	10		328		MN	II	2974.785	2973.917	5		328	
MN	II	2952.746	2951.883	40	68.	328		MN	II	2975.309	2974.450	5		328	
MN	II	2953.735	2952.871	100	49.	328		MN	II	2975.664	2974.795	5		328	
MN	II	2955.077	2954.213	50	49.	328		MN	II	2977.273	2976.405	20		328	
MN	II	2955.13	2954.26	5		328		MN	II	2977.347	2976.477	125	81.	328	
MN	II	2955.43	2954.57	0		328		MN	II	2977.734	2976.865	100	81.	328	
MN	II	2956.004	2955.141	100	49.	328		MN	II	2978.016	2977.147	1		328	
MN	II	2956.165	2955.302	10	49.	328		MN	II	2978.162	2977.292	1		328	
MN	II	2956.243	2955.379	60	49.	328		MN	II	2978.559	2977.690	2		328	
MN	II	2956.866	2956.002	80	49.	328		MN	II	2978.652	2977.823	60	81.	328	
MN	II	2957.034	2956.170	100	49.	328		MN	II	2978.903	2978.036	20	81.	328	
MN	II	2957.626	2956.762	5		328		MN	II	2979.19	2978.32	1		328	
MN	II	2957.841	2956.977	50	49.	328		MN	II	2979.861	2978.990	80	81.	328	
MN	II	2958.259	2957.394	10		328		MN	II	2981.316	2980.446	2		328	
MN	II	2958.68	2957.82	0		328		MN	II	2981.593	2980.722	40		328	
MN	II	2958.785	2957.920	1		328		MN	II	2982.690	2981.820	5		328	
MN	II	2958.928	2958.064	40		328		MN	II	2984.287	2983.416	3		328	
MN	II	2959.579	2958.715	50		328		MN	II	2985.465	2984.593	60		328	
MN	II	2959.807	2958.942	100	49.	328		MN	II	2985.992	2985.120	15		328	
MN	II	2960.806	2959.940	20		328		MN	II	2987.264	2986.393	5		328	
MN	II	2961.212	2960.345	50		328		MN	II	2987.550	2986.679	1		328	
MN	II	2962.02	2961.16	1		328		MN	II	2987.668	2986.797	0		328	
MN	II	2962.070	2961.204	5		328		MN	II	2989.299	2988.426	5		328	
MN	II	2962.554	2961.689	100	49.	328		MN	II	2989.364	2988.491	2		328	
MN	II	2964.49	2963.63	0		328		MN	II	2990.605	2989.732	60		328	
MN	II	2965.28	2964.41	1		328		MN	II	2993.283	2992.410	20		328	
MN	II	2965.376	2964.509	15		328		MN	II	2993.69	2992.82	3		328	
MN	II	2966.662	2965.795	5		328		MN	II	2994.176	2993.303	30		328	
MN	II	2966.820	2965.954	40		328		MN	II	2994.484	2993.611	50		328	
MN	II	2968.904	2968.037	2		328		MN	II	2994.97	2994.11	1		328	
MN	II	2969.00	2968.14	2		328		MN	II	2995.27	2994.40	0		328	
MN	II	2969.280	2968.415	1		328		MN	II	2996.181	2995.307	5		328	
MN	II	2969.48	2968.61	0		328		MN	II	2997.097	2996.223	20		328	
MN	II	2970.82	2969.95	0		328		MN	II	2997.21	2996.34	0		328	
MN	II	2971.703	2970.835	2		328		MN	II	2997.477	2996.603	8		328	
MN	II	2971.824	2970.956	10		328		MN	II	2998.030	2997.156	30		328	
MN	II	2972.233	2971.365	5		328		MN	II	2999.652	2998.778	10		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	3002.962	3002.087	20		328		MN	II	3044.95	3044.06	20		328	
MN	II	3003.899	3003.022	5		328		MN	II	3045.3	3044.5			909	F
MN	II	3006.018	3005.142	10		328		MN	II	3047.158	3046.271	125	10.	328	
MN	II	3011.80	3010.93	0		328		MN	II	3047.75	3046.86	5		328	
MN	II	3012.85	3011.97	10		328		MN	II	3048.104	3047.217	50		328	
MN	II	3014.500	3013.622	20		328		MN	II	3049.28	3048.39	3		328	
MN	II	3015.726	3014.848	20		328		MN	II	3049.912	3049.025	100	21.	328	
MN	II	3016.733	3015.854	15		328		MN	II	3051.542	3050.654	170	21.	328	
MN	II	3018.539	3017.659	20		328		MN	II	3052.313	3051.426	140		328	
MN	II	3019.431	3018.552	2		328		MN	II	3053.07	3052.18	2		328	
MN	II	3020.597	3019.717	40		328		MN	II	3055.57	3054.68	5		328	
MN	II	3020.802	3019.923	170		328		MN	II	3056.775	3055.885	5		328	
MN	II	3021.365	3020.485	30		328		MN	II	3057.598	3056.709	30		328	
MN	II	3021.490	3020.610	15		328		MN	II	3058.53	3057.64	10		328	
MN	II	3021.847	3020.967	20		328		MN	II	3059.949	3059.060	100	21.	328	
MN	II	3021.98	3021.10	1		328		MN	II	3060.663	3059.772	20		328	
MN	II	3022.15	3021.27	5		328		MN	II	3063.402	3062.511	40		328	
MN	II	3022.602	3021.722	100		328		MN	II	3064.20	3063.31	3		328	
MN	II	3024.16	3023.28	2		328		MN	II	3066.600	3065.709	10		328	
MN	II	3025.37	3024.49	15		328		MN	II	3067.10	3066.21	2		328	
MN	II	3026.079	3025.198	40		328		MN	II	3070.12	3069.23	2		328	
MN	II	3027.74	3026.86	10		328		MN	II	3070.62	3069.73	2		328	
MN	II	3029.925	3029.043	140	10.	328		MN	II	3071.713	3070.821	80		328	
MN	II	3030.329	3029.446	60		328		MN	II	3072.677	3071.784	5		328	
MN	II	3031.921	3031.038	170		328		MN	II	3073.39	3072.50	1		328	
MN	II	3032.208	3031.324	50		328		MN	II	3073.769	3072.875	2		328	
MN	II	3032.89	3032.00	10		328		MN	II	3074.93	3074.04	10		328	
MN	II	3034.12	3033.24	2		328		MN	II	3075.89	3075.00	0		328	
MN	II	3034.457	3033.574	100	21.	328		MN	II	3076.000	3075.106	20		328	
MN	II	3035.032	3034.149	40		328		MN	II	3077.224	3076.330	30		328	
MN	II	3035.690	3034.807	100	21.	328		MN	II	3077.727	3076.833	10		328	
MN	II	3036.235	3035.350	170		328		MN	II	3078.81	3077.91	10		328	
MN	II	3038.976	3038.092	155		328		MN	II	3080.28	3079.38	20		328	
MN	II	3039.392	3038.507	140		328		MN	II	3081.40	3080.50	0		328	
MN	II	3039.776	3038.892	40		328		MN	II	3081.584	3080.688	10		328	
MN	II	3040.076	3039.192	30		328		MN	II	3082.043	3081.148	5		328	
MN	II	3040.435	3039.550	125	10.	328		MN	II	3083.188	3082.292	20		328	
MN	II	3043.3	3042.4			909	F	MN	II	3084.55	3083.66	0		328	
MN	II	3043.5	3042.6			909	F	MN	II	3085.14	3084.24	3		328	
MN	II	3044.014	3043.128	125	21.	328		MN	II	3085.468	3084.572	50		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	II	3085.608	3084.712	30		328		MN	II	3131.928	3131.020	20		328	
MN	II	3086.615	3085.719	20		328		MN	II	3135.575	3134.666	40		328	
MN	II	3087.868	3086.972	40		328		MN	II	3135.62	3134.72	3	15.	328	
MN	II	3089.43	3088.53	5		328		MN	II	3135.73	3134.82	15	15.	328	
MN	II	3090.30	3089.40	0		328		MN	II	3136.42	3135.51	10	15.	328	
MN	II	3093.84	3092.94	1		328		MN	II	3136.57	3135.66	5	15.	328	
MN	II	3094.32	3093.42	5		328		MN	II	3136.645	3135.735	40		328	
MN	II	3095.72	3094.82	1		328		MN	II	3137.22	3136.31	8	15.	328	
MN	II	3096.892	3095.992	20		328		MN	II	3137.38	3136.47	5	15.	328	
MN	II	3097.195	3096.296	30		328		MN	II	3137.85	3136.94	7	15.	328	
MN	II	3100.274	3099.303	20		328		MN	II	3137.96	3137.05	3	15.	328	
MN	II	3100.61	3099.71	1		328		MN	II	3138.21	3137.30	3	15.	328	
MN	II	3103.463	3102.564	15		328		MN	II	3140.754	3139.844	40		328	
MN	II	3103.89	3102.99	1		328		MN	II	3143.213	3142.303	50		328	
MN	II	3104.860	3103.958	0		328		MN	II	3145.37	3144.45	40		328	
MN	II	3105.024	3104.122	30		328		MN	II	3146.591	3145.679	80		328	
MN	II	3105.164	3104.262	15		328		MN	II	3147.009	3146.116	30		328	
MN	II	3105.339	3104.438	50		328		MN	II	3150.844	3149.931	30		328	
MN	II	3106.785	3105.883	50		328		MN	II	3151.338	3150.426	30		328	
MN	II	3106.98	3106.08	4		328		MN	II	3156.36	3155.44	10		328	
MN	II	3107.192	3106.290	20		328		MN	II	3157.34	3156.43	25		328	
MN	II	3107.27	3106.37	2		328		MN	II	3158.53	3157.61	1		328	
MN	II	3107.897	3106.995	5		328		MN	II	3160.22	3159.30	30		328	
MN	II	3109.719	3108.816	60		328		MN	II	3165.69	3164.77	5		328	
MN	II	3110.160	3109.257	80		328		MN	II	3166.357	3165.440	30		328	
MN	II	3110.719	3109.816	10		328		MN	II	3168.44	3167.52	2		328	
MN	II	3111.08	3110.18	40		328		MN	II	3168.97	3168.05	4		328	
MN	II	3111.98	3111.08	10		328		MN	II	3169.133	3168.216	30		328	
MN	II	3112.157	3111.256	50		328		MN	II	3169.82	3168.91	2		328	
MN	II	3114.13	3113.23	10		328		MN	II	3169.96	3169.05	0		328	
MN	II	3118.326	3117.422	50		328		MN	II	3170.831	3169.914	50		328	
MN	II	3119.828	3118.922	50		328		MN	II	3171.65	3170.74	3		328	
MN	II	3121.489	3120.584	30		328		MN	II	3171.717	3170.800	50		328	
MN	II	3122.78	3121.87	10		328		MN	II	3173.04	3172.13	1		328	
MN	II	3124.040	3123.134	50		328		MN	II	3173.603	3172.685	10		328	
MN	II	3124.595	3123.688	40		328		MN	II	3173.856	3172.937	80		328	
MN	II	3126.134	3125.228	80		328		MN	II	3174.381	3173.463	40		328	
MN	II	3127.641	3126.734	30		328		MN	II	3174.95	3174.03	0		328	
MN	II	3128.853	3127.946	20		328		MN	II	3184.01	3183.09	2		328	
MN	II	3129.539	3128.631	30		328		MN	II	3184.266	3183.373	40		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	3184.481	3183.560	80		328		MN	II	3232.386	3231.453	80		328	
MN	II	3184.957	3184.035	20		328		MN	II	3232.94	3232.01	30		328	
MN	II	3185.739	3184.818	40		328		MN	II	3236.603	3235.669	5		328	
MN	II	3187.645	3186.724	15		328		MN	II	3245.651	3244.715	10		328	
MN	II	3187.976	3187.054	100		328		MN	II	3247.31	3246.37	8		328	
MN	II	3189.84	3188.92	0		328		MN	II	3252.258	3251.319	30		328	
MN	II	3190.156	3189.233	40		328		MN	II	3253.319	3252.380	10		328	
MN	II	3191.45	3190.53	5		328		MN	II	3253.659	3252.720	30		328	
MN	II	3193.57	3192.64	5		328		MN	II	3256.16	3255.22	2		328	
MN	II	3194.501	3193.578	10		328		MN	II	3257.57	3256.62	20		328	
MN	II	3195.263	3194.339	20		328		MN	II	3258.46	3257.53	20		328	
MN	II	3197.168	3196.244	40		328		MN	II	3262.120	3261.180	140		328	
MN	II	3197.929	3197.006	80		328		MN	II	3262.70	3261.75	1		328	
MN	II	3198.08	3197.15	0		328		MN	II	3262.810	3261.869	20		328	
MN	II	3198.489	3197.565	40		328		MN	II	3265.112	3264.171	125		328	
MN	II	3199.069	3198.145	20		328		MN	II	3271.597	3270.655	100		328	
MN	II	3199.185	3198.261	2		328		MN	II	3271.728	3270.784	30		328	
MN	II	3199.837	3198.913	80		328		MN	II	3271.954	3271.010	10		328	
MN	II	3200.448	3199.522	20		328		MN	II	3272.117	3271.174	40		328	
MN	II	3202.584	3201.658	100		328		MN	II	3272.291	3271.347	20		328	
MN	II	3203.543	3202.617	30		328		MN	II	3273.079	3272.138	20		328	
MN	II	3205.05	3204.12	10		328		MN	II	3273.67	3272.72	20		328	
MN	II	3205.676	3204.749	15		328		MN	II	3274.568	3273.624	10		328	
MN	II	3205.800	3204.874	140		328		MN	II	3274.734	3273.791	15		328	
MN	II	3206.186	3205.259	30		328		MN	II	3274.987	3274.043	30		328	
MN	II	3207.395	3206.467	100		328		MN	II	3275.554	3274.610	100		328	
MN	II	3209.36	3208.42	2		328		MN	II	3275.953	3275.009	10		328	
MN	II	3209.601	3208.674	10		328		MN	II	3277.698	3276.753	140		328	
MN	II	3209.769	3208.842	10		328		MN	II	3281.023	3280.078	50		328	
MN	II	3210.875	3209.948	20		328		MN	II	3284.27	3283.32	2		328	
MN	II	3211.73	3210.81	1		328		MN	II	3284.402	3283.456	20		328	
MN	II	3212.121	3211.191	40		328		MN	II	3284.97	3284.02	5		328	
MN	II	3212.663	3211.735	80		328		MN	II	3285.08	3284.12	2		328	
MN	II	3214.018	3213.090	20		328		MN	II	3285.891	3284.945	40		328	
MN	II	3214.46	3213.54	15		328		MN	II	3286.13	3285.18	2		328	
MN	II	3218.47	3217.54	3		328		MN	II	3286.986	3286.040	10		328	
MN	II	3226.559	3225.628	30		328		MN	II	3287.561	3286.613	20		328	
MN	II	3226.659	3225.727	5		328		MN	II	3288.08	3287.13	20		328	
MN	II	3228.55	3227.61	3		328		MN	II	3288.169	3287.222	80		328	
MN	II	3232.03	3231.10	1		328		MN	II	3288.983	3288.035	50		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	II	3289.236	3288.288	20		328		MN	II	3341.36	3340.40	10		328	
MN	II	3289.950	3289.002	40		328		MN	II	3342.406	3341.445	170		328	
MN	II	3291.019	3290.070	10		328		MN	II	3342.78	3341.82	80		328	
MN	II	3292.369	3291.420	10		328		MN	II	3343.291	3342.330	30		328	
MN	II	3292.671	3291.723	10		328		MN	II	3343.97	3343.01	25		328	
MN	II	3296.30	3295.36	5		328		MN	II	3345.7	3344.7			909	F
MN	II	3296.482	3295.533	20		328		MN	II	3349.21	3348.24	40		328	
MN	II	3297.92	3296.97	5		328		MN	II	3350.47	3349.50	100		328	
MN	II	3298.979	3298.029	80		328		MN	II	3357.064	3356.100	140		328	
MN	II	3300.06	3299.11	10		328		MN	II	3359.376	3358.411	100		328	
MN	II	3302.20	3301.25	5		328		MN	II	3360.581	3359.614	10		328	
MN	II	3302.46	3301.50	2		328		MN	II	3363.377	3362.412	40		328	
MN	II	3304.378	3303.427	10		328		MN	II	3363.986	3363.019	170		328	
MN	II	3307.416	3306.464	20		328		MN	II	3366.99	3366.03	30		328	
MN	II	3308.762	3307.810	100		328		MN	II	3367.083	3366.116	80		328	
MN	II	3309.413	3308.461	40		328		MN	II	3368.69	3367.72	10		328	
MN	II	3313.736	3312.783	20		328		MN	II	3375.983	3374.919	30		328	
MN	II	3314.75	3313.79	5		328		MN	II	3377.25	3376.28	50		328	
MN	II	3314.871	3313.916	20		328		MN	II	3377.385	3376.415	20		328	
MN	II	3321.53	3320.57	60		328		MN	II	3378.951	3377.981	15		328	
MN	II	3322.955	3321.999	40		328		MN	II	3379.69	3378.72	20		328	
MN	II	3323.87	3322.92	30		328		MN	II	3380.285	3379.315	15		328	
MN	II	3325.073	3324.116	100		328		MN	II	3382.548	3381.677	80		328	
MN	II	3326.79	3325.83	10		328		MN	II	3383.06	3382.09	2		328	
MN	II	3327.025	3326.069	30		328		MN	II	3384.554	3383.582	0		328	
MN	II	3327.123	3326.166	10		328		MN	II	3385.78	3384.81	80		328	
MN	II	3327.38	3326.42	30		328		MN	II	3387.12	3386.15	5		328	
MN	II	3328.23	3327.27	20		328		MN	II	3388.723	3387.749	80		328	
MN	II	3328.960	3328.003	140		328		MN	II	3388.790	3387.816	20		328	
MN	II	3329.368	3328.411	100		328		MN	II	3390.703	3389.730	140		328	
MN	II	3331.73	3330.75	450		328		MN	II	3391.049	3390.076	15		328	
MN	II	3332.479	3331.521	140		328		MN	II	3392.23	3391.26	1		328	
MN	II	3333.233	3332.274	30		328		MN	II	3392.84	3391.97	10		328	
MN	II	3333.320	3332.361	40		328		MN	II	3393.440	3392.466	8		328	
MN	II	3334.075	3333.115	40		328		MN	II	3395.361	3394.387	60		328	
MN	II	3337.355	3336.394	320		328		MN	II	3395.816	3394.842	80		328	
MN	II	3337.718	3336.757	100		328		MN	II	3395.975	3395.000	8		328	
MN	II	3338.348	3337.387	280		328		MN	II	3401.092	3400.117	170		328	
MN	II	3338.8	3337.8			909	F	MN	II	3402.609	3401.633	100		328	
MN	II	3340.55	3339.59	10		328		MN	II	3408.10	3407.11	2		328	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2025.317	2024.666	10		301	
MN	III	2025.415	2024.764	8		301	
MN	III	2025.680	2025.029	6		301	
MN	III	2026.13	2025.48	60		301	
MN	III	2026.382	2025.731	6		301	
MN	III	2026.827	2026.176	6		301	
MN	III	2027.589	2026.938	20	11.	301	
MN	III	2027.746	2027.095	5	11.	301	
MN	III	2027.964	2027.312	4	11.	301	
MN	III	2028.487	2027.835	1000	17.	301	
MN	III	2028.800	2028.148	500		301	
MN	III	2030.061	2029.409	80	17.	301	
MN	III	2031.152	2030.499	20		301	
MN	III	2031.536	2030.883	1		301	
MN	III	2032.167	2031.514	100	11.	301	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2032.405	2031.748	45		802	
MN	III	2032.753	2032.100	20		301	
MN	III	2032.966	2032.313	5		301	
MN	III	2033.699	2033.046	50		301	
MN	III	2034.236	2033.582	7		301	
MN	III	2034.414	2033.760	5		301	
MN	III	2035.154	2034.500	100	11.	301	
MN	III	2035.535	2034.881	50		301	
MN	III	2036.159	2035.505	10		301	
MN	III	2037.317	2036.662	30	17.	301	
MN	III	2037.968	2037.315	150	11.	301	
MN	III	2039.139	2038.486	100		301	
MN	III	2039.603	2038.955	100	11.	301	
MN	III	2040.61	2039.96	200		301	
MN	III	2041.249	2040.595	10		301	
MN	III	2043.404	2042.749	2		301	
MN	III	2043.64	2042.99	1		301	
MN	III	2045.230	2044.575	300	11.	301	
MN	III	2045.699	2045.044	100		301	
MN	III	2046.128	2045.515	1		301	
MN	III	2049.59	2048.93	400		301	
MN	III	2050.002	2049.345	50		301	
MN	III	2050.340	2049.683	500	11.	301	
MN	III	2051.326	2050.669	20		301	
MN	III	2052.102	2051.447	5		301	
MN	III	2053.240	2052.584	50		301	
MN	III	2053.402	2052.746	100		301	
MN	III	2054.73	2054.07	1		301	
MN	III	2055.627	2054.970	100		301	
MN	III	2056.359	2055.702	8		301	
MN	III	2057.462	2056.805	300		301	
MN	III	2058.163	2057.506	30		301	
MN	III	2058.724	2058.066	2		301	
MN	III	2059.011	2058.353	1		301	
MN	III	2059.887	2059.229	1		301	
MN	III	2060.34	2059.68	1		301	
MN	III	2061.352	2060.694	30		301	
MN	III	2062.068	2061.407	6		802	
MN	III	2062.583	2061.924	10		301	
MN	III	2063.800	2063.138	85		802	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2063.816	2063.157	20	301		MN	III	2096.476	2095.809	75		802
MN	III	2064.043	2063.382	80	802		MN	III	2098.601	2097.937	500	10.	301
MN	III	2064.479	2063.820	15	301		MN	III	2100.638	2099.973	500	10.	301
MN	III	2066.554	2065.894	100	301		MN	III	2101.768	2101.103	200	10.	301
MN	III	2067.040	2066.382	500	301		MN	III	2105.26	2104.59	5		301
MN	III	2067.84	2067.18	2	301		MN	III	2105.481	2104.815	3		301
MN	III	2068.062	2067.403	80	301		MN	III	2106.004	2105.332	60		802
MN	III	2068.42	2067.76	2	301		MN	III	2106.65	2105.98	10	10.	301
MN	III	2069.684	2069.025	1000	301	10.	MN	III	2108.57	2107.90	15	10.	301
MN	III	2070.37	2069.71	8	301		MN	III	2109.278	2108.610	15	10.	301
MN	III	2070.486	2069.827	8	301		MN	III	2109.660	2108.989	50		802
MN	III	2071.389	2070.729	10	301		MN	III	2110.987	2110.319	10		301
MN	III	2072.16	2071.50	2	301		MN	III	2111.188	2110.519	20		802
MN	III	2072.87	2072.21	3	301		MN	III	2113.035	2112.362	9		802
MN	III	2073.360	2072.696	70	802		MN	III	2113.946	2113.277	40		802
MN	III	2073.816	2073.156	5	301		MN	III	2114.214	2113.545	4		802
MN	III	2074.034	2073.374	200	301		MN	III	2114.39	2113.72	2		301
MN	III	2078.036	2077.374	900	301	10.	MN	III	2115.972	2115.300	6		802
MN	III	2078.786	2078.124	300	301		MN	III	2116.514	2115.842	8		802
MN	III	2080.061	2079.399	15	301		MN	III	2116.743	2116.070	18		802
MN	III	2081.691	2081.028	10	301		MN	III	2117.020	2116.350	10		802
MN	III	2081.716	2081.053	70	802		MN	III	2117.270	2116.602	6		301
MN	III	2081.807	2081.141	75	802		MN	III	2117.874	2117.206	2		301
MN	III	2082.370	2081.704	40	802		MN	III	2118.950	2118.281	20		301
MN	III	2082.89	2082.23	1	301		MN	III	2119.84	2119.17	1		301
MN	III	2083.503	2082.836	15	802		MN	III	2120.32	2119.65	100		301
MN	III	2084.092	2083.430	20	301		MN	III	2122.068	2121.402	100		301
MN	III	2084.892	2084.230	800	301	10.	MN	III	2122.601	2121.931	35		802
MN	III	2086.973	2086.310	3	301		MN	III	2123.547	2122.877	15		301
MN	III	2087.287	2086.624	60	301		MN	III	2123.923	2123.253	300		301
MN	III	2088.281	2087.618	2	301		MN	III	2124.45	2123.78	1		301
MN	III	2088.570	2087.907	5	301		MN	III	2125.875	2125.204	200		301
MN	III	2089.436	2088.773	10	301		MN	III	2126.827	2126.156	200		301
MN	III	2090.718	2090.054	600	301	10.	MN	III	2127.85	2127.18	150		301
MN	III	2090.921	2090.257	300	301	10.	MN	III	2128.24	2127.57	15		301
MN	III	2091.848	2091.184	5	301		MN	III	2131.270	2130.597	200		301
MN	III	2093.440	2092.775	5	301		MN	III	2135.384	2134.712	5		301
MN	III	2094.814	2094.149	300	301		MN	III	2137.396	2136.722	4		802
MN	III	2095.450	2094.785	500	301	10.	MN	III	2139.51	2138.84	1		301
MN	III	2095.758	2095.093	200	301	10.	MN	III	2139.921	2139.244	25		802

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2141.402	2140.728	100		301		MN	III	2187.238	2186.554	60		301	
MN	III	2141.763	2141.089	1		301		MN	III	2188.442	2187.756	75		802	
MN	III	2142.388	2141.714	80		301		MN	III	2189.354	2188.671	5		301	
MN	III	2142.927	2142.253	15		301		MN	III	2190.37	2189.69	5		301	
MN	III	2143.267	2142.593	5		301		MN	III	2190.535	2189.852	80		301	
MN	III	2144.07	2143.40	5		301		MN	III	2193.575	2192.891	4		301	
MN	III	2144.22	2143.55	5		301		MN	III	2194.251	2193.567	150		301	
MN	III	2144.520	2143.845	2		301		MN	III	2195.529	2194.843	55		802	
MN	III	2144.890	2144.215	80		301		MN	III	2198.340	2197.655	5		301	
MN	III	2145.467	2144.788	35		802		MN	III	2199.722	2199.033	75		802	
MN	III	2148.731	2148.055	150		301		MN	III	2203.794	2203.104	45		802	
MN	III	2149.246	2148.570	100		301		MN	III	2205.515	2204.827	5		301	
MN	III	2150.12	2149.45	15		301		MN	III	2210.130	2209.442	0		802	
MN	III	2151.370	2150.695	30		301		MN	III	2211.64	2210.95	2		301	
MN	III	2151.747	2151.072	10		301		MN	III	2212.638	2211.949	400		301	
MN	III	2152.485	2151.810	3		301		MN	III	2213.115	2212.425	600	16.	301	
MN	III	2153.63	2152.95	5		301		MN	III	2213.310	2212.620	10		301	
MN	III	2154.663	2153.987	200		301		MN	III	2214.798	2214.108	10		301	
MN	III	2154.89	2154.21	1		301		MN	III	2215.902	2215.212	800	16.	301	
MN	III	2155.453	2154.777	10		301		MN	III	2220.493	2219.802	20		301	
MN	III	2156.254	2155.578	1		301		MN	III	2221.237	2220.546	900	16.	301	
MN	III	2158.48	2157.80	3		301		MN	III	2221.435	2220.744	20	16.	301	
MN	III	2158.993	2158.316	100		301		MN	III	2225.377	2224.684	2		802	
MN	III	2162.340	2161.662	50		301		MN	III	2226.063	2225.371	10		301	
MN	III	2162.782	2162.104	1		301		MN	III	2227.32	2226.61	3		301	
MN	III	2166.34	2165.66	80		301		MN	III	2227.621	2226.928	10		301	
MN	III	2168.573	2167.895	1		301		MN	III	2228.12	2227.42	1000	16.	301	
MN	III	2170.336	2169.657	1000		488		MN	III	2228.60	2227.90	1		301	
MN	III	2170.457	2169.778	1000		301		MN	III	2229.137	2228.444	20	16.	301	
MN	III	2170.634	2169.955	50		301		MN	III	2231.32	2230.62	1		301	
MN	III	2173.828	2173.145	30		802		MN	III	2232.10	2231.41	2		301	
MN	III	2174.832	2174.152	700		301		MN	III	2234.008	2233.312	2		802	
MN	III	2177.552	2176.871	900		301		MN	III	2234.73	2234.03	2	16.	301	
MN	III	2180.750	2180.068	3		301		MN	III	2234.89	2234.19	2		301	
MN	III	2182.535	2181.853	800		301		MN	III	2237.18	2236.48	1		301	
MN	III	2182.93	2182.25	3		301		MN	III	2238.72	2238.03	10	16.	301	
MN	III	2184.229	2183.546	3		301		MN	III	2240.026	2239.331	5		301	
MN	III	2184.521	2183.838	50		301		MN	III	2243.355	2242.655	0		802	
MN	III	2185.563	2184.880	800		301		MN	III	2244.832	2244.136	2		301	
MN	III	2185.816	2185.132	600		301		MN	III	2245.585	2244.889	3		301	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2246.75	2246.05	1	16.	301		MN	III	2343.99	2343.28	10		301	
MN	III	2247.342	2246.645	1		301		MN	III	2344.84	2344.13	3		301	
MN	III	2248.734	2248.037	2		301		MN	III	2346.346	2345.628	5		301	
MN	III	2250.758	2250.060	5		301		MN	III	2347.638	2346.919	5	15.	301	
MN	III	2256.48	2255.77	2		301		MN	III	2348.184	2347.465	3		301	
MN	III	2256.827	2256.128	2		301		MN	III	2351.242	2350.523	15	15.	301	
MN	III	2259.842	2259.143	3		301		MN	III	2355.381	2354.661	15	15.	301	
MN	III	2261.24	2260.53	2		301		MN	III	2356.993	2356.272	10	15.	301	
MN	III	2261.93	2261.23	2		301		MN	III	2358.529	2357.808	5		301	
MN	III	2263.51	2262.81	2		301		MN	III	2359.77	2359.05	3	15.	301	
MN	III	2267.311	2266.610	7		301		MN	III	2361.760	2361.038	3		301	
MN	III	2269.03	2268.33	6		301		MN	III	2363.08	2362.36	10	15.	301	
MN	III	2270.245	2269.540	0		802		MN	III	2366.156	2365.413	20	15.	301	
MN	III	2270.96	2270.26	1		301		MN	III	2374.36	2373.64	2		301	
MN	III	2271.826	2271.124	5		301		MN	III	2374.570	2373.845	10	14.	301	
MN	III	2272.34	2271.64	1		301		MN	III	2375.037	2374.312	20	15.	301	
MN	III	2275.95	2275.25	2		301		MN	III	2376.7	2375.9			909	F
MN	III	2283.90	2283.19	2		301		MN	III	2377.1	2376.4			909	F
MN	III	2285.11	2284.41	2		301		MN	III	2378.2	2377.5			909	F
MN	III	2292.79	2292.09	7		301		MN	III	2378.6	2377.9			909	F
MN	III	2294.041	2293.334	5		301		MN	III	2380.905	2380.179	20		301	
MN	III	2295.565	2294.858	3		301		MN	III	2385.552	2384.825	20		301	
MN	III	2296.754	2296.043	1		802		MN	III	2389.41	2388.69	15		301	
MN	III	2296.89	2296.19	2		301		MN	III	2389.763	2389.035	5	14.	301	
MN	III	2298.37	2297.67	3		301		MN	III	2389.87	2389.15	5		301	
MN	III	2299.384	2298.676	3		301		MN	III	2399.05	2398.32	5	14.	301	
MN	III	2299.675	2298.963	0		802		MN	III	2399.30	2398.57	3		301	
MN	III	2308.883	2308.173	10		301		MN	III	2408.811	2408.078	10	14.	301	
MN	III	2309.582	2308.872	2		301		MN	III	2410.042	2409.309	10	14.	301	
MN	III	2310.224	2309.514	3		301		MN	III	2410.957	2410.220	40		802	
MN	III	2314.245	2313.534	5		301		MN	III	2419.659	2418.924	15		301	
MN	III	2314.629	2313.918	7		301		MN	III	2424.244	2423.508	10	14.	301	
MN	III	2317.180	2316.465	6		802		MN	III	2424.467	2423.731	15	14.	301	
MN	III	2318.857	2318.145	2		301		MN	III	2429.059	2428.321	2		802	
MN	III	2323.475	2322.762	5		301		MN	III	2429.909	2429.172	5		301	
MN	III	2330.942	2330.227	2		301		MN	III	2430.799	2430.061	10		301	
MN	III	2331.43	2330.72	7		301		MN	III	2433.18	2432.44	7		301	
MN	III	2331.800	2331.085	7		301		MN	III	2434.222	2433.484	15	14.	301	
MN	III	2340.622	2339.905	5	15.	301		MN	III	2438.596	2437.853	60		802	
MN	III	2341.943	2341.226	10	15.	301		MN	III	2442.062	2441.319	80		802	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
MN	III	2458.909	2458.165	5	301		MN	III	2837.270	2836.436	3	301	
MN	III	2476.37	2475.62	1	301		MN	III	2838.126	2837.292	7	301	
MN	III	2486.78	2486.03	2	301		MN	III	2842.304	2841.469	7	301	
MN	III	2489.726	2488.975	10	301		MN	III	2843.864	2843.028	30	301	
MN	III	2496.79	2496.04	15	301		MN	III	2847.465	2846.628	3	301	
MN	III	2503.475	2502.721	3	301		MN	III	2847.724	2846.887	1	301	
MN	III	2507.87	2507.12	3	301		MN	III	2849.085	2848.248	2	301	
MN	III	2541.008	2540.245	10	301		MN	III	2849.460	2848.623	3	301	
MN	III	2542.583	2541.820	1	301		MN	III	2854.566	2853.728	70	301	
MN	III	2547.078	2546.314	10	301		MN	III	2854.980	2854.141	7	301	
MN	III	2548.272	2547.507	7	301		MN	III	2858.17	2857.33	1	301	
MN	III	2554.297	2553.531	7	301		MN	III	2862.20	2861.36	25	301	
MN	III	2555.701	2554.935	5	301		MN	III	2870.346	2869.504	3	301	
MN	III	2558.569	2557.802	2	301		MN	III	2889.36	2888.52	1	301	
MN	III	2568.838	2568.068	5	301		MN	III	2894.08	2893.23	1	301	
MN	III	2572.038	2571.268	2	301		MN	III	2911.436	2910.584	10	301	
MN	III	2575.05	2574.28	2	301		MN	III	2911.87	2911.02	1	301	
MN	III	2578.11	2577.34	1	301		MN	III	2914.336	2913.483	1	301	
MN	III	2596.425	2595.649	5	301		MN	III	2922.784	2921.924	2	301	
MN	III	2682.30	2681.50	2	301		MN	III	2926.056	2925.200	3	301	
MN	III	2688.379	2687.581	5	301		MN	III	2927.590	2926.734	7	301	
MN	III	2692.780	2691.984	10	301		MN	III	2966.16	2965.30	1	301	
MN	III	2715.740	2714.936	10	301		MN	III	3001.168	3000.293	1	301	
MN	III	2717.89	2717.09	1	301		MN	III	3087.8	3086.9		909	F
MN	III	2723.954	2723.147	7	301		MN	III	3087.9	3087.0		909	F
MN	III	2732.830	2732.021	1	301		MN	III	3089.4	3088.4		909	F
MN	III	2739.868	2739.057	1	301		MN	III	3095.3	3094.4		909	F
MN	III	2755.429	2754.615	7	301		MN	III	3101.333	3100.433	1	301	
MN	III	2756.973	2756.158	15	301		MN	III	3255.00	3254.06	2	301	
MN	III	2758.380	2757.565	10	301		MN	III	3255.597	3254.658	2	301	
MN	III	2759.660	2758.845	15	301		MN	III	3280.240	3279.295	5	301	
MN	III	2760.433	2759.618	7	301		MN	III	3288.436	3287.489	100	301	
MN	III	2760.602	2759.787	10	301		MN	III	3296.985	3296.036	7	301	
MN	III	2767.227	2766.410	1	301		MN	III	3303.223	3302.272	90	301	
MN	III	2771.547	2770.729	1	301		MN	III	3310.670	3309.717	5	301	
MN	III	2775.63	2774.81	1	301		MN	III	3314.427	3313.473	70	301	
MN	III	2779.05	2778.23	1	301		MN	III	3320.71	3319.76	2	301	
MN	III	2780.190	2779.370	2	301		MN	III	3322.987	3322.031	50	301	
MN	III	2795.340	2794.516	2	301		MN	III	3326.756	3325.799	1	301	
MN	III	2816.14	2815.31	15	301		MN	III	3391.619	3390.646	15	301	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
MN	III	3403.57	3402.59	10		301		MN	XII	2455.8	2455.1			726	F
MN	III	3419.9	3418.8			909	F	MN	XII	2863.7	2862.9			726	F
MN	III	3423.8	3422.8			909	F								
MN	III	3428.4	3427.4			909	F	N	I	3467.489	3466.497	100	2.	521	F
MN	III	3434.772	3433.788	20		301		N	I	3467.535	3466.543	20	2.	521	F
MN	III	3457.670	3456.680	3		301		N	II	2045.416	2044.761		27.	521	P
MN	III	3460.39	3459.38	1		301		N	II	2065.650	2064.990		14.0	521	P
MN	III	3470.122	3469.128	7		301		N	II	2077.606	2076.944	70	14.0	200	
MN	III	3508.449	3507.447	40		301		N	II	2080.631	2079.968	40	14.0	200	
MN	III	3512.742	3511.738	70		301		N	II	2081.783	2081.120		14.0	521	P
MN	III	3524.78	3523.77	1		301		N	II	2091.981	2091.316	40	16.0	200	
MN	III	3541.530	3540.519	100		301		N	II	2094.849	2094.183	40	16.0	200	
								N	II	2096.198	2095.532	160	16.0	200	
								N	II	2096.858	2096.192	70	16.0	200	
MN	IV	2026.404	2025.750	350		799		N	II	2097.522	2096.856	110	16.0	200	
MN	IV	2046.861	2046.202	0		799									
MN	IV	2048.912	2048.255	120		799									
MN	IV	2068.706	2068.046	40		799		N	II	2125.674	2125.003		14.0	521	P
MN	IV	2073.029	2072.364	10		799		N	II	2126.115	2125.444		26.	521	P
								N	II	2130.852	2130.179	110	25.	200	
								N	II	2139.681	2139.007	70	0.0	200	
MN	IV	2086.480	2085.813	0		799		N	II	2140.162	2139.489		15.0	521	P
MN	IV	2101.379	2100.709	0		799									
MN	IV	2105.631	2104.962	20		799									
MN	IV	2109.011	2108.339	0		799		N	II	2143.450	2142.775	160	0.0	200	
MN	IV	2131.560	2130.885	0		799		N	II	2152.29	2151.61	1		246	Q
								N	II	2160.605	2159.927	40	24.	200	
								N	II	2166.110	2165.431		15.0	521	P
MN	IV	2142.649	2141.974	0		799		N	II	2167.285	2166.605		15.0	521	P
MN	IV	2230.823	2230.128	20		799									
MN	IV	2237.076	2236.382	40		799									
MN	IV	2239.968	2239.272	20		799		N	II	2169.456	2168.778		15.0	521	P
MN	IV	2248.904	2248.205	0		799		N	II	2190.326	2189.643		15.0	521	P
								N	II	2190.47	2189.78	20		200	N
								N	II	2191.583	2190.900		15.0	521	P
MN	IV	2258.856	2258.155	0		799		N	II	2198.192	2197.506	70	18.0	200	
MN	IV	2409.250	2408.515	30		799									
MN	IV	2418.432	2417.698	0		799									
MN	IV	2446.334	2445.592	50		799									
								N	II	2204.321	2203.633	40	18.0	200	
								N	II	2206.543	2205.855		18.0	521	P
								N	II	2206.776	2206.088	160	15.	200	
MN	X	2517.6	2516.8			726	F	N	II	2219.11	2218.41	1	14.1	200	
MN	X	2957.0	2956.1			726	F	N	II	2219.164	2218.474		18.0	521	P
MN	XI	2342.1	2341.4			726	F	N	II	2221.540	2220.850		18.0	521	P
MN	XI	2539.1	2538.3			726	F	N	II	2223.03	2222.34		18.0	521	P
MN	XI	2926.6	2925.7			726	F	N	II	2230.725	2230.034		30.	521	P
MN	XI	3240.6	3239.7			726	F	N	II	2231.420	2230.729		16.0	521	P
MN	XI	3383.0	3382.0			726	F	N	II	2234.450	2233.758		16.0	521	P

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
N	II	2235.902	2235.208	70	18.0	200		N	II	2259.643	2258.945		16.0	521	P
N	II	2236.089	2235.396		18.0	521	P	N	II	2260.921	2260.223		16.0	521	P
N	II	2239.669	2238.974	70	18.0	200		N	II	2263.284	2262.585		16.0	521	P
N	II	2246.122	2245.426		16.0	521	P	N	II	2264.031	2263.332		16.0	521	P
N	II	2250.980	2250.283		16.0	521	P	N	II	2266.401	2265.701		16.0	521	P
								N	II	2271.353	2270.651		16.0	521	P
								N	II	2284.357	2283.652	70	20.0	200	
								N	II	2286.009	2285.305		16.0	521	P
								N	II	2287.322	2286.618		16.0	521	P
								N	II	2287.394	2286.689	160	20.0	200	
								N	II	2289.150	2288.444	110	20.0	200	
								N	II	2290.54	2289.84	1	16.0	200	
								N	II	2290.965	2290.259	40	20.0	200	
								N	II	2292.358	2291.652	70	16.0	200	
								N	II	2293.359	2292.652	40	20.0	200	
								N	II	2294.025	2293.318	70	20.0	200	
								N	II	2294.240	2293.534		16.0	521	P
								N	II	2303.92	2303.21	5	16.0	200	
								N	II	2305.63	2304.92		36.	521	P
								N	II	2307.159	2306.451		16.0	521	P
								N	II	2307.522	2306.814		36.	521	P
								N	II	2309.97	2309.26		36.	521	P
								N	II	2310.24	2309.53	5	36.	200	
								N	II	2311.871	2311.161		36.	521	P
								N	II	2312.292	2311.582		16.0	521	P
								N	II	2312.84	2312.13	1	35.	200	
								N	II	2315.96	2315.25	1	35.	200	
								N	II	2316.00	2315.29		35.	521	P
								N	II	2317.205	2316.493	220	16.	200	
								N	II	2317.402	2316.690	160	16.	200	
								N	II	2317.758	2317.046	285	16.	200	
								N	II	2320.33	2319.62		35.	521	P
								N	II	2320.654	2319.941	70	16.	200	
								N	II	2322.363	2321.650	70	16.	200	
								N	II	2325.87	2325.16	1	16.	200	
								N	II	2327.054	2326.340	40	29.	200	
								N	II	2331.570	2330.855	20		200	N
								N	II	2356.047	2355.328		18.0	521	P
								N	II	2357.62	2356.90	1	49.	200	
								N	II	2364.76	2364.04	1	48.	200	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
N	II	2366.42	2365.70		48.	521	P	N	II	2523.52	2522.76		42.	521	P
N	II	2387.51	2386.78	5	18.0	200		N	II	2525.247	2524.488	70	19.	200	
N	II	2388.958	2388.230	40	18.0	200		N	II	2526.08	2525.32		42.	521	P
N	II	2391.594	2390.866	70	18.0	200		N	II	2526.23	2525.48	1	42.	200	
N	II	2416.986	2416.253		18.0	521	P	N	II	2526.93	2526.17	1	19.	200	
N	II	2418.517	2417.784		18.0	521	P	N	II	2528.522	2527.762	20	41.	200	
N	II	2437.030	2436.291		18.0	521	P	N	II	2538.25	2537.49	1	40.	200	
N	II	2453.171	2452.430		20.0	521	P	N	II	2538.504	2537.742		40.	521	P
N	II	2455.296	2454.554		20.0	521	P	N	II	2538.635	2537.873	40	40.	200	
N	II	2458.818	2458.075		20.0	521	P	N	II	2543.370	2542.609		18.1	521	P
N	II	2462.015	2461.270	160	23.	200		N	II	2547.151	2546.388		18.1	521	P
N	II	2462.58	2461.83	1	53.	200		N	II	2550.74	2549.98		47.	521	P
N	II	2488.871	2488.120	20	20.	200		N	II	2552.41	2551.64	20	47.	200	
N	II	2489.497	2488.746	40	20.	200		N	II	2554.188	2553.422	70	47.	200	
N	II	2491.032	2490.281	70	18.0	200		N	II	2554.387	2553.622		47.	521	P
N	II	2491.96	2491.21	40	34.	200		N	II	2559.39	2558.62	1	18.0	200	
N	II	2492.21	2491.46	40	34.	200		N	II	2559.79	2559.02		18.0	521	P
N	II	2493.91	2493.16	20	20.	200		N	II	2561.011	2560.243	40	46.	200	
N	II	2494.692	2493.940	40	20.	200		N	II	2562.313	2561.545	5	46.	200	
N	II	2495.46	2494.71	40	34.	200		N	II	2562.585	2561.818		46.	521	P
N	II	2495.67	2494.92	1	34.	200		N	II	2562.711	2561.943	20	46.	200	
N	II	2497.27	2496.52		34.	521	P	N	II	2563.62	2562.85		18.0	521	P
N	II	2497.58	2496.83	110	20.	200		N	II	2564.087	2563.319	40	46.	200	
N	II	2497.73	2496.97	70	34.	200		N	II	2564.307	2563.539		46.	521	P
N	II	2500.578	2499.825	20	34.	200		N	II	2564.580	2563.812		46.	521	P
N	II	2501.425	2500.672	70	33.	200		N	II	2564.708	2563.940		46.	521	P
N	II	2501.685	2500.931		33.	521	P	N	II	2591.713	2590.938	110	18.	200	
N	II	2501.808	2501.054		33.	521	P	N	II	2644.200	2643.413	20	50.	200	
N	II	2504.943	2504.188	70	33.	200		N	II	2644.72	2643.93	5	50.	200	
N	II	2505.148	2504.399		33.	521	P	N	II	2646.80	2646.02	1	50.	200	
N	II	2505.405	2504.653		33.	521	P	N	II	2647.66	2646.87	1	50.	200	
N	II	2505.528	2504.776		33.	521	P	N	II	2676.57	2675.78	20	52.	200	
N	II	2510.064	2509.310		33.	521	P	N	II	2680.40	2679.60	5	52.	200	
N	II	2510.272	2509.518		33.	521	P	N	II	2691.28	2690.49	5	51.	200	
N	II	2510.656	2509.902		33.	521	P	N	II	2691.526	2690.728		51.	521	P
N	II	2520.980	2520.222	110	19.	200		N	II	2693.666	2692.867		22.0	521	P
N	II	2521.549	2520.791	160	19.	200		N	II	2710.640	2709.837	160	22.	200	
N	II	2522.986	2522.227	220	19.	200		N	II	2719.459	2718.655		17.0	521	P
N	II	2523.217	2522.458	70	19.	200		N	II	2732.18	2731.37	5	54.	200	
N	II	2523.38	2522.62		42.	521	P	N	II	2735.511	2734.702	20	28.	200	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
N	II	2736.771	2735.962	21.0	521	P	N	II	2944.150	2943.291	37.	521	P
N	II	2740.227	2739.417	17.0	521	P	N	II	2944.356	2943.495	70	37.	200
N	II	2740.234	2739.424	21.0	521	P	N	II	2948.380	2947.520	45.	521	P
N	II	2745.489	2744.678	17.0	521	P	N	II	2948.627	2947.767	45.	521	P
N	II	2747.493	2746.681	17.0	521	P	N	II	2950.469	2949.608	45.	521	P
N	II	2770.876	2770.060	21.0	521	P	N	II	2950.716	2949.855	45.	521	P
N	II	2773.617	2772.798	21.0	521	P	N	II	2953.112	2952.250	45.	521	P
N	II	2775.633	2774.815	21.0	521	P	N	II	2953.452	2952.590	45.	521	P
N	II	2777.807	2776.989	17.0	521	P	N	II	2955.546	2954.684	45.	521	P
N	II	2781.760	2780.940	17.0	521	P	N	II	2955.889	2955.027	45.	521	P
N	II	2800.041	2799.216	110	21.	200	N	II	2956.899	2956.036	44.	521	P
N	II	2814.843	2814.016	20.0	521	P	N	II	2958.199	2957.336	45.	521	P
N	II	2819.948	2819.120	20.0	521	P	N	II	2958.543	2957.680	45.	521	P
N	II	2824.466	2823.635	110	17.	200	N	II	2961.638	2960.774	44.	521	P
N	II	2830.190	2829.358	5	55.	200	N	II	2963.818	2962.953	70	44.	200
N	II	2831.20	2830.36	1	55.	200	N	II	2964.302	2963.437	44.	521	P
N	II	2878.525	2877.681	70	32.	200	N	II	2974.469	2973.601	40	43.	200
N	II	2880.596	2879.751	70	32.	200	N	II	2975.52	2974.65	20	43.	200
N	II	2885.092	2884.246	70	32.	200	N	II	2976.593	2975.725	43.	521	P
N	II	2885.284	2884.439	32.	521	P	N	II	2976.815	2975.947	43.	521	P
N	II	2885.531	2884.685	20	32.	200	N	II	2977.840	2976.971	70	43.	200
N	II	2886.119	2885.273	160	32.	200	N	II	2978.20	2977.33	43.	521	P
N	II	2891.894	2891.046	40	32.	200	N	II	2979.284	2978.415	43.	521	P
N	II	2892.333	2891.486	32.	512	P	N	II	2979.507	2978.638	43.	521	P
N	II	2893.716	2892.868	70	31.	200	N	II	3007.706	3006.830	220	18.	200
N	II	2894.737	2893.889	5	31.	200	N	II	3024.549	3023.668	70	35.	200
N	II	2894.949	2894.101	31.	521	P	N	II	3063.72	3062.83	2.	521	F
N	II	2898.352	2897.503	70	31.	200	N	II	3071.44	3070.55	2.	521	F
N	II	2898.697	2897.849	31.	521	P	N	II	3077.196	3076.304	55.0	521	P
N	II	2899.724	2898.875	31.	521	P	N	II	3077.465	3076.573	55.0	521	P
N	II	2899.936	2899.086	5	31.	200	N	II	3079.000	3078.108	34.0	521	P
N	II	2905.208	2904.357	5	31.	200	N	II	3082.117	3081.222	20	55.0	200
N	II	2905.563	2904.713	31.	521	P	N	II	3082.380	3081.485	20	55.0	200
N	II	2906.807	2905.956	31.	521	P	N	II	3083.086	3082.191	70	55.0	200
N	II	2918.588	2917.734	5	39.	200	N	II	3085.051	3084.155	20	55.0	200
N	II	2918.831	2917.979	39.	521	P	N	II	3087.68	3086.78	20	55.0	200
N	II	2923.56	2922.70	5	39.	200	N	II	3115.189	3114.286	17.0	521	P
N	II	2923.906	2923.050	5	39.	200	N	II	3126.823	3125.920	17.0	521	P
N	II	2929.512	2928.655	40	38.	200	N	II	3127.31	3126.40	40	58.0	200
N	II	2943.03	2942.17	40	37.	200	N	II	3128.277	3127.373	34.0	521	P

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
N	II	3131.901	3130.996	17.0	521	P	N	III	2147.982	2147.306	90	26.0	521
N	II	3151.186	3150.276	58.0	521	P	N	III	2148.598	2147.922	40	26.0	521
N	II	3177.79	3176.87	0.0	521	P	N	III	2148.784	2148.108	60	26.0	521
N	II	3191.116	3190.194	22.0	521	P	N	III	2149.169	2148.493	60	26.0	521
N	II	3197.315	3196.391	22.0	521	P	N	III	2149.686	2149.010	25	26.0	521
N	II	3201.610	3200.685	20	61.0	200	N	III	2149.686	2149.010	25	26.0	521
N	II	3207.636	3206.709	20	61.0	200	N	III	2150.139	2149.465	4	26.0	521
N	II	3312.369	3311.418	22.	521	P	N	III	2150.715	2150.040	10	26.0	521
N	II	3319.053	3318.098	110	22.	200	N	III	2185.785	2185.101	25	32.	521
N	II	3325.529	3324.573	110	22.	200	N	III	2188.887	2188.205	200	32.	521
N	II	3329.687	3328.730	220	22.	200	N	III	2189.061	2188.379	150	32.	521
N	II	3330.662	3329.704	110	1.0	200	N	III	2189.20	2188.52	25		168
N	II	3331.272	3330.314	110	22.	200	N	III	2189.40	2188.62	40		168
N	II	3332.268	3331.310	160	22.	200	N	III	2192.119	2191.436	60	31.	521
N	II	3409.105	3408.127	110	7.	200	N	III	2193.277	2192.593	10	31.	521
N	II	3438.132	3437.147	360	13.	200	N	III	2232.34	2231.65	1	24.0	521
N	II	3452.264	3451.277		26.0	521	N	III	2237.90	2237.21	1	24.0	521
N	III	2035.67	2035.02	25		246	N	III	2248.35	2247.65	10	23.	521
N	III	2036.27	2035.62	10		246	N	III	2248.65	2247.95	90	23.	521
N	III	2064.16	2063.50	250		168	N	III	2249.63	2248.93	60	23.	521
N	III	2064.666	2064.007	200	30.	521							
N	III	2065.083	2064.423	250	30.	521							
N	III	2068.91	2068.25	90		168	N						
N	III	2069.340	2068.681	120	30.	521	N						
N	III	2071.29	2070.63	60		177	N						
N	III	2071.748	2071.088	90	29.0	521	N						
N	III	2073.52	2072.86	4		177	N						
N	III	2075.40	2074.74	10		177	N						
N	III	2080.52	2079.86	90		246	N						
N	III	2116.261	2117.593	90	29.0	521							
N	III	2121.133	2120.464	40	29.0	521							
N	III	2122.171	2121.501	90	29.0	521							
N	III	2143.34	2142.67	1		246	N						
N	III	2144.709	2144.034	4	26.0	521							
N	III	2146.54	2145.86	25	26.0	521	Q						
N	III	2147.246	2146.570	4	26.0	521							
N	III	2147.637	2146.961	4	26.0	521							

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
N	III	2266.57	2265.87	1	26.0	521	N	III	2715.15	2714.35	1	21.	521
N	III	2268.03	2267.33	25	26.0	521	N	III	2863.02	2862.18	250	26.	521
N	III	2270.00	2269.30	1	26.0	521	N	III	2973.43	2972.56	25	25.	521
N	III	2271.13	2270.43	10	26.0	521	N	III	2978.16	2977.29	10	25.	521
N	III	2272.49	2271.79	1	26.0	521	N	III	2979.70	2978.83	10	25.	521
N	III	2273.12	2272.42	1	26.0	521	N	III	2982.94	2982.07	4		246
N	III	2274.21	2273.51	4	26.0	521	N	III	2984.51	2983.64	F	25.	521
N	III	2274.82	2274.12	1	26.0	521	N	III	3172.06	3171.14	4		246
N	III	2280.84	2280.14	F	7.4	521	N	III	3173.89	3172.97	10		246
N	III	2283.95	2283.25	F	7.4	521	N	III	3304.98	3304.03	40	12.0	521
N	III	2284.29	2283.59	F	7.4	521	N	III	3307.58	3306.63	60	12.0	521
N	III	2288.18	2287.48	F	7.4	521	N	III	3343.67	3342.71	25	7.	521
N	III	2288.53	2287.83	F	7.4	521	N	III	3354.92	3353.96	40	5.	521
N	III	2315.27	2314.56	4	28.0	521	N	III	3355.23	3354.27	40	5.	521
N	III	2318.06	2317.35	1	28.0	521	N	III	3356.45	3355.49	40	7.	521
N	III	2321.04	2320.33	0	28.0	521	N	III	3359.75	3358.79	10	5.	521
N	III	2322.94	2322.23	1	28.0	521	N	III	3361.91	3360.95	25	5.	521
N	III	2323.52	2322.81	4	28.0	521	N	III	3362.87	3361.90	10		246
N	III	2368.15	2367.43	40		246	N	III	3365.78	3365.81	40	5.	521
N	III	2368.25	2367.53	25	28.0	521	N	III	3368.31	3367.34	120	5.	521
N	III	2371.25	2370.53	10	28.0	521	N	III	3375.03	3374.06	60	5.	521
N	III	2373.24	2372.52	4	28.0	521	N	IV	2036.22	2035.57	110	18.94	824
N	III	2454.63	2453.89	40	28.	521	N	IV	2036.76	2036.10	70	18.94	824
N	III	2460.00	2459.26	1	28.	521	N	IV	2037.08	2036.42	5	18.94	824
N	III	2463.30	2462.56	4	28.	521	N	IV	2072.45	2071.79	10		246
N	III	2463.78	2463.04	0	28.	521	N	IV	2081.00	2080.34	160	18.95	824
N	III	2466.99	2466.24	4	28.	521	N	IV	2318.80	2318.09	160	18.97	824
N	III	2469.11	2468.36	1	28.	521	N	IV	2402.78	2402.05	110	18.89	824
N	III	2471.98	2471.24	0	28.	521	N	IV	2422.39	2421.65	40	18.98	824
N	III	2483.60	2482.85	1	26.1	521	N	IV	2425.47	2424.73	20	18.98	824
N	III	2485.29	2484.54	40	26.1	521	N	IV	2427.28	2426.54	5	18.98	824
N	III	2487.18	2486.43	25	26.1	521	N	IV	2431.15	2430.41	40	18.93	824
N	III	2621.90	2621.12	25		910	N	IV	2431.81	2431.07	20	18.93	824
N	III	2623.65	2622.87	40		910	N	IV	2432.28	2431.55	1	18.93	824
N	III	2687.71	2686.91	60	25.0	521	N	IV	2478.44	2477.69	285	18.99	824
N	III	2690.00	2689.20	90	25.0	521	N	IV	2595.12	2594.34	20		824
N	III	2696.91	2696.11	25	24.0	521							
N	III	2697.51	2696.71	10	24.0	521							
N	III	2714.81	2714.01	25	21.	521							
N	III	2714.87	2714.07	4	21.	521							

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
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N	IV	2646.44	2645.65	450	19.	824
N	IV	2646.97	2646.18	550	19.	824
N	IV	2647.74	2646.96	650	19.	824
N	IV	2810.18	2809.35	20	18.99	824
N	IV	2885.62	2884.77	70	21.	824

N	IV	3079.14	3078.25	160	19.	824
N	IV	3119.70	3118.79	5	12.01	824
N	IV	3128.31	3127.41	20	12.01	824
N	IV	3142.06	3141.16	40	12.01	824
N	IV	3444.58	3443.59	40	7.	824

N	IV	3446.18	3445.20	20	7.	824
N	IV	3455.69	3454.70	20	7.	824
N	IV	3462.35	3461.36	20	7.	824
N	IV	3464.37	3463.37	160	7.	824
N	IV	3475.54	3474.55	40	7.	824

N	IV	3479.70	3478.71	1000	1.	824
N	IV	3483.99	3482.99	870	1.	824
N	IV	3485.96	3484.96	750	1.	824

N	V	2591.59	2590.81	10	55.	313
N	V	2592.22	2591.44	4	55.	313
N	V	2858.87	2858.03	40	56.	313
N	V	2860.00	2859.16	60	56.	313
N	V	2975.38	2974.52	90	59.	313

N	V	2981.65	2980.78	150	61.	313
N	V	2982.18	2981.31	250	64.	313
N	V	2999.30	2998.43	60	9.01	313
N	V	3160.67	3159.75	10	2.	313
N	V	3162.30	3161.38	25	2.	313

N	VI	2897.2	2896.4			97
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N	VII	2142.3	2141.7			309
N	VII	2306.5	2305.8			309
N	VII	2353.7	2353.0			309
N	VII	2523.3	2522.6			309
N	VII	2526.5	2525.8			309

N	VII	2567.3	2566.6			309
N	VII	2892.9	2892.0			309
N	VII	3306.1	3305.1			309

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
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NA	I	2491.484	2490.733		6.	488
NA	I	2512.883	2512.128		5.	488
NA	I	2512.965	2512.210		5.	488
NA	I	2544.604	2543.841	F	4.	1019
NA	I	2544.636	2543.872	F	4.	1019

NA	I	2594.644	2593.869	F	3.	1019
NA	I	2594.695	2593.919	F	3.	1019
NA	I	2681.137	2680.340	F	2.	1019
NA	I	2681.230	2680.433	F	2.	1019
NA	I	2853.649	2852.811	650	1.	1019

NA	I	2853.851	2853.013	570	1.	1019
NA	I	2894.466	2893.618	4		1019
NA	I	3303.319	3302.369	900	2.	1019
NA	I	3303.929	3302.979	800	2.	1019

NA	II	2167.45	2166.77	50		152
NA	II	2173.17	2172.49	0		152
NA	II	2217.25	2216.56	7		152
NA	II	2229.22	2228.53	80		152
NA	II	2261.20	2260.50	10		152

NA	II	2316.36	2315.65	1		693
NA	II	2493.903	2493.152	60		693
NA	II	2503.59	2502.84	4		693
NA	II	2507.050	2506.297	10		693
NA	II	2516.216	2515.461	10		693

NA	II	2532.308	2531.548	90	13.	693
NA	II	2587.085	2586.313	10		693
NA	II	2595.74J	2594.965	4		693
NA	II	2612.592	2611.812	120	12.	693
NA	II	2661.787	2660.997	120	11.	693

NA	II	2672.624	2671.832	90	10.	693
NA	II	2678.881	2678.087	60		693
NA	II	2800.02	2799.20	1		693
NA	II	2809.510	2808.685	4		693
NA	II	2810.340	2809.515	60		693

NA	II	2819.100	2818.272	10		693
NA	II	2830.682	2829.851	10		693
NA	II	2840.388	2839.554	40		693
NA	II	2842.555	2841.720	120	7.	693
NA	II	2857.39	2856.55	10		693

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NA	II	2860.319	2859.481	60	6.	693	
NA	II	2861.844	2861.006	4		693	
NA	II	2872.111	2871.270	60		693	
NA	II	2873.79	2872.95	1		693	
NA	II	2881.983	2881.140	90	8.	693	
NA	II	2887.094	2886.249	40		693	
NA	II	2894.793	2893.945	90	16.	693	
NA	II	2901.984	2901.135	40		693	
NA	II	2905.763	2904.912	120	7.	693	
NA	II	2918.368	2917.516	60	5.	693	
NA	II	2919.900	2919.048	60		693	
NA	II	2920.698	2919.846	10		693	
NA	II	2921.793	2920.941	40		693	
NA	II	2924.327	2923.474	25		693	
NA	II	2931.738	2930.883	4		693	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NA	II	2934.922	2934.065	10		693	
NA	II	2938.582	2937.725	60		693	
NA	II	2943.53	2942.67	1		693	
NA	II	2946.553	2945.693	40		693	
NA	II	2948.300	2947.440	60		693	
NA	II	2952.096	2951.235	150	14.	693	
NA	II	2953.255	2952.394	25		693	
NA	II	2960.974	2960.110	4		693	
NA	II	2966.611	2965.745	10		693	
NA	II	2971.591	2970.724	4		693	
NA	II	2975.102	2974.234	10		693	
NA	II	2975.857	2974.988	90	9.	693	
NA	II	2977.999	2977.130	25		693	
NA	II	2980.529	2979.660	90		693	
NA	II	2981.490	2980.623	25		693	
NA	II	2985.051	2984.183	120	5.	693	
NA	II	3007.946	3007.071	60	12.	1015	
NA	II	3008.316	3007.441	40	1.	693	
NA	II	3010.013	3009.138	40	13.	693	
NA	II	3016.276	3015.398	90	5.	693	
NA	II	3029.947	3029.066	90		693	
NA	II	3037.951	3037.068	60		693	
NA	II	3046.476	3045.590	60	11.	693	
NA	II	3051.096	3050.211	40		693	
NA	II	3054.549	3053.663	90	15.	693	
NA	II	3056.232	3055.346	4		693	
NA	II	3057.043	3056.157	90	1.	693	
NA	II	3059.613	3058.726	4		693	
NA	II	3062.220	3061.332	40		693	
NA	II	3065.260	3064.372	40	6.	693	
NA	II	3067.424	3066.535	40	18.	693	
NA	II	3071.72	3070.83	1		693	
NA	II	3075.225	3074.333	90	9.	693	
NA	II	3079.206	3078.314	150	2.	693	
NA	II	3079.625	3078.732	4		693	
NA	II	3081.142	3080.249	25		693	
NA	II	3087.940	3087.045	10		693	
NA	II	3093.624	3092.727	250	1.	693	
NA	II	3105.294	3104.394	40	17.	693	
NA	II	3108.59	3107.69	0		40	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NA	II	3125.316	3124.414	25		693		NA	III	2000.396	1999.749	15		525	
NA	II	3126.111	3125.208	4		693		NA	III	2004.864	2004.216	300		516	
NA	II	3130.273	3129.368	90	2.	693		NA	III	2005.866	2005.218	330		516	
NA	II	3136.389	3135.483	60	3.	693		NA	III	2006.195	2005.547	270		516	
NA	II	3138.759	3137.852	25		693		NA	III	2009.120	2008.471	330		516	
NA	II	3146.605	3145.696	25		693		NA	III	2009.978	2009.328			525	
NA	II	3147.202	3146.292	60		693		NA	III	2012.515	2011.866	450		516	
NA	II	3150.177	3149.267	60	4.	1015		NA	III	2014.820	2014.171	330		516	
NA	II	3150.47	3149.51	400		40		NA	III	2017.675	2017.025	360		516	
NA	II	3160.45	3159.53	1		693		NA	III	2017.88	2017.23	30		516	
NA	II	3162.08	3161.16	1		693		NA	III	2022.947	2022.295	270		516	
NA	II	3164.159	3163.245	4		693		NA	III	2023.877	2023.227	180		516	
NA	II	3164.644	3163.730	90	7.	693		NA	III	2029.203	2028.554	360		516	
NA	II	3165.07	3164.16	500		40		NA	III	2031.782	2031.129	360		516	
NA	II	3168.401	3167.486	10		693		NA	III	2036.552	2035.898	330		516	
NA	II	3176.004	3175.086	25		693		NA	III	2039.431	2037.778	240		516	
NA	II	3179.972	3179.053	60	7.	693		NA	III	2042.317	2041.663	360		516	
NA	II	3190.702	3189.780	90	4.	693		NA	III	2043.946	2043.291	360		516	
NA	II	3213.111	3212.185	90	4.	693		NA	III	2045.479	2044.824	300		516	
NA	II	3217.210	3216.284	10		693		NA	III	2046.099	2045.444	300		516	
NA	II	3226.905	3225.976	40		693		NA	III	2048.63	2047.97	30		516	
NA	II	3235.856	3234.925	40		693		NA	III	2048.970	2048.314	180		516	
NA	II	3251.883	3250.947	25		693		NA	III	2049.376	2048.720	210		516	
NA	II	3258.902	3257.964	90		693		NA	III	2052.141	2051.486	330		516	
NA	II	3261.155	3260.216	25		693		NA	III	2052.503	2051.847	150		516	
NA	II	3275.161	3274.218	60		693		NA	III	2055.841	2055.184	270		516	
NA	II	3286.546	3285.600	150		693		NA	III	2059.39	2058.73	120		516	
NA	II	3302.294	3301.346	10		693		NA	III	2061.019	2060.361	300		516	
NA	II	3305.899	3304.950	25		693		NA	III	2063.649	2062.990	150		516	
NA	II	3318.983	3318.031	40		693		NA	III	2065.942	2065.282	120		516	
NA	II	3328.639	3327.684	40		693		NA	III	2067.261	2066.603	450		516	
NA	II	3374.23	3373.26	0		40		NA	III	2067.568	2066.907	240		516	
NA	II	3401.20	3400.20	25		40		NA	III	2073.334	2072.674	330		516	
NA	II	3463.483	3462.492	25		693		NA	III	2078.636	2077.974	270		516	
NA	II	3534.04	3533.03	1000		40		NA	III	2083.570	2082.909	390		516	
NA	II	3632.40	3631.37	800		40		NA	III	2095.474	2094.809	120		516	
								NA	III	2100.229	2099.564	180		516	
								NA	III	2101.110	2100.445	90		516	
								NA	III	2103.429	2102.763	360		516	
								NA	III	2105.43	2104.76	0		516	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	I	2562.468	2561.700	10		896	M	NE	I	2703.362	2702.560	6		896	
NE	I	2575.32	2574.55	8		723		NE	I	2705.08	2704.28	2		723	
NE	I	2590.25	2589.48	2		723		NE	I	2707.54	2706.74	2		1029	Q
NE	I	2591.44	2590.67	10		723		NE	I	2724.594	2723.787	8		896	M
NE	I	2591.92	2591.15	3		723		NE	I	2725.578	2724.772	74		796	
NE	I	2595.28	2594.51	2		723		NE	I	2732.165	2731.358	3		723	
NE	I	2595.98	2595.21	30		1029	Q	NE	I	2732.336	2731.528	3		723	
NE	I	2614.41	2613.63	30		723		NE	I	2733.42	2732.61	1		723	
NE	I	2614.705	2613.925	8		896		NE	I	2735.564	2734.755	2		723	
NE	I	2615.04	2614.26	5		723		NE	I	2735.977	2735.168	3		723	
NE	I	2617.40	2616.62	25		723		NE	I	2736.50	2735.69	8		723	
NE	I	2619.80	2619.02	3		1029	Q	NE	I	2736.983	2736.174	116		796	
NE	I	2620.55	2619.77	2		1029	Q	NE	I	2744.34	2743.53	15		723	
NE	I	2621.88	2621.10	4		1029	Q	NE	I	2756.63	2755.82	15		723	
NE	I	2623.68	2622.90	15		723		NE	I	2759.45	2758.64	3		723	
NE	I	2636.757	2635.971	6		896	M	NE	I	2760.136	2759.323	2		723	
NE	I	2640.76	2639.97	15		723		NE	I	2763.138	2762.324	3		723	
NE	I	2643.26	2642.47	8		723		NE	I	2767.189	2766.372	6		896	
NE	I	2646.30	2645.51	30		1029	Q	NE	I	2768.10	2767.28	3		723	
NE	I	2648.21	2647.42	150		723		NE	I	2768.59	2767.77	2		723	
NE	I	2648.55	2647.76	8		723		NE	I	2775.869	2775.051	149		796	
NE	I	2649.00	2648.21	15		723		NE	I	2782.24	2781.42	2		1029	Q
NE	I	2649.35	2648.56	25		723		NE	I	2782.45	2781.63	3		723	
NE	I	2651.80	2651.01	30		1029	Q	NE	I	2782.89	2782.07	2		723	
NE	I	2658.345	2657.554	12		896		NE	I	2793.142	2792.319	30		896	
NE	I	2668.63	2667.84	1		1029	Q	NE	I	2793.483	2792.660	3		723	
NE	I	2669.92	2669.13	3		723		NE	I	2795.419	2794.595	30		796	
NE	I	2670.15	2669.36	3		1029	N	NE	I	2795.916	2795.092	30		796	
NE	I	2676.070	2675.275	15	13.	896		NE	I	2796.437	2795.613	1		723	
NE	I	2676.43	2675.64	100	13.	488		NE	I	2796.787	2795.963	8		723	
NE	I	2677.814	2677.020	1		723		NE	I	2800.63	2799.80	2		723	
NE	I	2678.185	2677.389	1		896		NE	I	2815.520	2814.691	3		896	
NE	I	2678.701	2677.905	15		896		NE	I	2826.089	2825.259	10		723	
NE	I	2680.004	2679.208	3		896	M	NE	I	2826.443	2825.613	40		796	
NE	I	2681.480	2680.685	1		723		NE	I	2828.421	2827.589	10		896	
NE	I	2686.050	2685.253	3		896		NE	I	2833.753	2832.921	8		723	
NE	I	2687.540	2686.742	12		896		NE	I	2836.069	2835.236	50		796	
NE	I	2701.356	2700.555	8		723		NE	I	2843.40	2842.57	166		796	
NE	I	2701.53	2700.73	2		723		NE	I	2844.5	2843.7	1		1029	Q
NE	I	2702.440	2701.639	6		896		NE	I	2847.326	2846.490	2		723	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	I	2855.45	2854.61	1		1029	Q	NE	I	3080.075	3079.181	4		896	
NE	I	2862.908	2862.070	8		723		NE	I	3102.31	3101.41	4		1029	Q
NE	I	2873.510	2872.666	25		896		NE	I	3127.1051	3126.1986	100		896	
NE	I	2881.133	2880.290	3		723		NE	I	3148.611	3147.701	25		723	
NE	I	2882.12	2881.28	1		1029		NE	I	3149.5229	3148.6107	6		896	
NE	I	2882.696	2881.852	2		723		NE	I	3154.3241	3153.4017	6		896	
NE	I	2912.313	2911.461	25		723		NE	I	3168.4931	3167.5762	4		896	
NE	I	2914.027	2913.174	60	12.	896		NE	I	3207.12	3206.20	1		1029	Q
NE	I	2914.270	2913.417	2		723		NE	I	3208.83	3207.91	6		1029	Q
NE	I	2930.167	2929.312	15		723		NE	I	3352.7126	3351.7492	5		389	
NE	I	2933.584	2932.727	10	14.	896		NE	I	3370.7760	3359.8080	70	2.	389	
NE	I	2945.434	2944.575	2		723		NE	I	3370.8758	3369.9078	200	2.	389	
NE	I	2947.592	2946.732	2		723		NE	I	3376.6185	3375.6490	10		389	
NE	I	2948.164	2947.303	60	11.	896		NE	I	3418.8839	3417.9035	70	4.	389	
NE	I	2949.904	2949.043	10		723		NE	I	3418.9865	3418.0062	10		389	
NE	I	2950.177	2949.316	15		723		NE	I	3424.8944	3423.9126	10		389	
NE	I	2953.389	2952.527	5		723		NE	I	3448.6908	3447.7028	30		389	
NE	I	2958.156	2957.293	8		723		NE	I	3451.7537	3450.7650	10		389	
NE	I	2975.590	2974.722	125	10.	896		NE	I	3455.1845	3454.1949	15		389	
NE	I	2976.391	2975.523	32		796		NE	I	3461.5156	3460.5243	15		389	
NE	I	2980.681	2979.812	3		896		NE	I	3465.3309	3464.3387	15		389	
NE	I	2981.518	2980.649	20		896		NE	I	3467.5715	3466.5787	30		389	
NE	I	2981.789	2980.922	84		796		NE	I	3473.5654	3472.5711	70	2.	389	
NE	I	2983.542	2982.672	110	9.	896		NE	I	3499.0649	3498.0640	15		389	
NE	I	2993.304	2992.432	60	8.	896		NE	I	3502.2180	3501.2163	30		389	
NE	I	2993.329	2992.457	60	8.	488		NE	II	2002.523	2001.875	70		563	
NE	I	2995.121	2994.250	3		723		NE	II	2004.579	2003.930	10		563	
NE	I	3013.015	3012.137	25		896		NE	II	2005.476	2004.827	30		563	
NE	I	3013.837	3012.959	30		896		NE	II	2007.658	2007.009	80		563	
NE	I	3018.235	3017.356	80		896		NE	II	2012.799	2012.149	40		563	
NE	I	3027.79	3026.91	8		1029	Q	NE	II	2015.018	2014.367	5		563	
NE	I	3029.30	3028.42	2		1029	Q	NE	II	2019.302	2018.651	5		563	
NE	I	3031.204	3030.322	4		896		NE	II	2026.213	2025.560	80		563	
NE	I	3046.835	3045.949	7		723		NE	II	2031.446	2030.793	30		563	
NE	I	3058.274	3057.388	190		723		NE	II	2043.076	2042.420	20		563	
NE	I	3064.587	3063.696	5		896		NE	II	2054.796	2054.138	10		563	
NE	I	3066.56	3065.67	3		1029	Q	NE	II	2072.080	2071.419	10		563	
NE	I	3068.10	3067.21	14		1029	Q	NE	II	2077.161	2076.499	5		563	
NE	I	3077.870	3076.976	20		896		NE	II	2086.130	2085.466	150		563	
NE	I	3079.772	3078.878	4		896		NE	II	2096.772	2096.106	180		563	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NE	II	2096.914	2096.248	120	.	563		NE	II	2306.059	2305.350	30	.	563	
NE	II	2166.885	2166.205	50	.	563		NE	II	2306.672	2305.962	60	.	563	
NE	II	2171.193	2170.513	30	.	563		NE	II	2307.336	2306.626	5	.	563	
NE	II	2171.352	2170.671	70	.	563		NE	II	2311.089	2310.378	30	.	563	
NE	II	2182.458	2181.775	20	.	563		NE	II	2311.434	2310.723	60	.	563	
NE	II	2191.111	2190.426	40	.	563		NE	II	2312.342	2311.631	20	.	563	
NE	II	2211.291	2210.602	5	.	563		NE	II	2312.431	2311.720	30	.	563	
NE	II	2227.022	2226.330	10	.	563		NE	II	2314.262	2313.547	5	.	563	
NE	II	2230.507	2229.814	10	.	563		NE	II	2315.807	2315.095	5	.	563	
NE	II	2231.810	2231.117	10	.	563		NE	II	2316.528	2315.816	10	.	563	
NE	II	2232.484	2231.791	40	.	563		NE	II	2317.776	2317.064	20	.	563	
NE	II	2235.409	2234.715	5	.	563		NE	II	2319.177	2318.465	20	.	563	
NE	II	2236.562	2235.868	5	.	563		NE	II	2322.888	2322.175	5	.	563	
NE	II	2236.945	2236.251	30	.	563		NE	II	2324.879	2324.165	5	.	563	
NE	II	2242.927	2242.232	5	.	563		NE	II	2330.002	2329.288	30	.	563	
NE	II	2253.399	2252.701	5	.	563		NE	II	2340.462	2339.745	40	.	563	
NE	II	2253.503	2252.805	50	.	563		NE	II	2340.777	2340.060	10	.	563	
NE	II	2257.097	2256.398	5	.	563		NE	II	2365.699	2364.976	50	.	563	
NE	II	2257.511	2256.812	20	.	563		NE	II	2365.876	2365.153	70	.	563	
NE	II	2257.601	2256.902	20	.	563		NE	II	2375.541	2374.816	40	.	563	
NE	II	2273.328	2272.626	5	.	563		NE	II	2376.214	2375.489	40	.	563	
NE	II	2299.163	2298.455	10	.	563		NE	II	2381.093	2380.367	10	.	563	
NE	II	2300.953	2300.245	50	.	563		NE	II	2387.767	2387.039	5	.	563	
NE	II	2301.401	2300.693	5	.	563		NE	II	2387.832	2387.104	5	.	563	
NE	II	2305.543	2304.834	20	.	563		NE	II	2405.123	2404.391	20	.	563	
								NE	II	2407.310	2406.578	20	.	563	
								NE	II	2415.997	2415.263	50	.	563	
								NE	II	2417.232	2416.498	10	.	563	
								NE	II	2418.069	2417.334	60	.	563	
								NE	II	2418.477	2417.743	40	.	563	
								NE	II	2420.636	2419.901	40	.	563	
								NE	II	2422.870	2422.135	10	.	563	
								NE	II	2423.701	2422.965	60	.	563	
								NE	II	2424.181	2423.445	70	.	563	
								NE	II	2425.290	2424.554	30	.	563	
								NE	II	2429.188	2428.451	60	.	563	
								NE	II	2429.444	2428.707	60	.	563	
								NE	II	2430.049	2429.312	30	.	563	
								NE	II	2430.510	2429.773	30	.	563	
								NE	II	2430.755	2430.018	60	.	563	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NE	II	2430.902	2430.164	60	.	563		NE	II	2562.891	2562.123	80	.	563	
NE	II	2431.704	2430.966	5	.	563		NE	II	2565.192	2564.423	10	.	563	
NE	II	2432.834	2432.096	40	.	563		NE	II	2566.627	2565.858	70	.	563	
NE	II	2434.210	2433.472	40	.	563		NE	II	2567.890	2567.121	90	.	563	
NE	II	2435.349	2434.611	40	.	563		NE	II	2568.152	2567.383	70	.	563	
NE	II	2435.374	2434.636	20	.	563		NE	II	2572.212	2571.442	40	.	563	
NE	II	2436.385	2435.646	60	.	563		NE	II	2572.234	2571.464	50	.	563	
NE	II	2437.211	2436.472	10	.	563		NE	II	2573.671	2572.900	70	.	563	
NE	II	2437.508	2436.769	5	.	563		NE	II	2574.903	2574.132	70	.	563	
NE	II	2439.859	2439.119	50	.	563		NE	II	2578.715	2577.943	20	.	563	
NE	II	2441.375	2440.635	10	.	563		NE	II	2578.735	2577.963	30	.	563	
NE	II	2442.177	2441.437	50	.	563		NE	II	2580.177	2579.405	50	.	563	
NE	II	2442.895	2442.155	20	.	563		NE	II	2588.66J	2587.886	40	.	563	
NE	II	2445.045	2444.304	10	.	563		NE	II	2588.734	2587.960	50	.	563	
NE	II	2445.878	2445.137	20	.	563		NE	II	2606.784	2606.006	50	.	563	
NE	II	2455.892	2455.149	20	.	563		NE	II	2608.819	2608.040	60	.	563	
NE	II	2456.540	2455.796	5	.	563		NE	II	2611.089	2610.310	60	.	563	
NE	II	2456.730	2455.987	20	.	563		NE	II	2621.319	2620.537	60	.	563	
NE	II	2459.092	2458.348	40	.	563		NE	II	2622.338	2621.556	50	.	563	
NE	II	2461.986	2461.241	50	.	563		NE	II	2623.890	2623.107	80	.	563	
NE	II	2469.938	2469.192	5	.	563		NE	II	2624.243	2623.460	60	.	563	
NE	II	2470.749	2470.002	20	.	563		NE	II	2626.774	2625.991	60	.	563	
NE	II	2478.292	2477.544	40	.	563		NE	II	2628.971	2628.187	60	.	563	
NE	II	2478.987	2478.239	10	.	563		NE	II	2629.111	2628.327	30	.	563	
NE	II	2479.474	2478.726	5	.	563		NE	II	2630.505	2629.721	70	.	563	
NE	II	2514.400	2513.643	60	.	563		NE	II	2630.669	2629.885	80	.	563	
NE	II	2518.864	2518.106	20	.	563		NE	II	2632.414	2631.630	20	.	563	
NE	II	2519.074	2518.316	10	.	563		NE	II	2632.752	2631.967	60	.	563	
NE	II	2519.635	2518.877	5	.	563		NE	II	2636.855	2636.069	90	.	563	
NE	II	2520.484	2519.726	50	.	563		NE	II	2637.728	2636.942	60	.	563	
NE	II	2520.510	2519.752	70	.	563		NE	II	2638.623	2637.837	20	.	563	
NE	II	2524.226	2523.467	40	.	563		NE	II	2638.882	2638.096	70	.	563	
NE	II	2525.629	2524.870	30	.	563		NE	II	2639.075	2638.289	80	.	563	
NE	II	2530.989	2530.228	10	.	563		NE	II	2639.346	2638.560	70	.	563	
NE	II	2532.914	2532.153	60	.	563		NE	II	2641.454	2640.667	60	.	563	
NE	II	2532.950	2532.189	50	.	563		NE	II	2642.311	2641.524	70	.	563	
NE	II	2539.272	2538.510	60	.	563		NE	II	2644.414	2643.627	60	.	563	
NE	II	2561.309	2560.541	20	.	563		NE	II	2644.471	2643.684	60	.	563	
NE	II	2562.569	2561.801	70	.	563		NE	II	2644.885	2644.097	80	.	563	
NE	II	2562.830	2562.062	70	.	563		NE	II	2646.433	2645.645	50	.	563	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NE	II	2646.966	2646.178	40	.	563		NE	II	2723.283	2722.477	5	.	563	
NE	II	2652.043	2651.254	70	.	563		NE	II	2740.044	2739.233	5	.	563	
NE	II	2653.383	2652.593	50	.	563		NE	II	2740.360	2739.550	20	.	563	
NE	II	2655.091	2654.301	10	.	563		NE	II	2742.748	2741.937	10	.	563	
NE	II	2667.710	2666.917	10	.	563		NE	II	2757.4333	2756.6186	70	10.	389	
NE	II	2668.674	2667.881	60	.	563		NE	II	2763.7380	2762.9218	80	10.	389	
NE	II	2669.503	2668.710	40	.	563		NE	II	2771.3928	2770.5747	70	10.	389	
NE	II	2669.851	2669.057	60	.	563		NE	II	2780.848	2780.027	50	10.	563	
NE	II	2671.407	2670.613	70	.	563		NE	II	2792.8405	2792.0172	90	10.	389	
NE	II	2672.988	2672.194	20	.	563		NE	II	2795.0434	2794.2195	80	10.	389	
NE	II	2674.217	2673.422	60	.	563		NE	II	2810.3118	2809.4842	100	10.	389	
NE	II	2675.013	2674.219	5	.	563		NE	II	2858.860	2858.020	50	.	1016	
NE	II	2675.547	2674.752	60	.	563		NE	II	2870.798	2869.956	40	.	1016	
NE	II	2676.397	2675.602	40	.	563		NE	II	2873.8035	2872.9604	60	.	389	
NE	II	2676.642	2675.847	30	.	563		NE	II	2877.173	2876.329	80	.	1016	
NE	II	2677.036	2676.241	40	.	563		NE	II	2877.312	2876.468	70	.	1016	
NE	II	2684.188	2683.391	50	.	563		NE	II	2878.960	2878.116	5	.	1016	
NE	II	2684.955	2684.158	50	.	563		NE	II	2889.261	2888.414	30	.	1016	
NE	II	2685.777	2684.979	50	.	563		NE	II	2892.313	2891.465	5	.	1016	
NE	II	2687.148	2686.350	10	.	563		NE	II	2897.852	2897.003	20	.	1016	
NE	II	2688.846	2688.048	5	.	563		NE	II	2898.049	2897.200	50	.	563	
NE	II	2688.867	2688.069	5	.	563		NE	II	2898.523	2897.674	80	.	1016	
NE	II	2688.929	2688.131	10	.	563		NE	II	2901.959	2901.109	10	.	563	
NE	II	2690.216	2689.418	5	.	563		NE	II	2907.443	2906.592	80	.	1016	
NE	II	2693.249	2692.450	50	.	563		NE	II	2907.6682	2906.8167	80	.	389	
NE	II	2694.155	2693.356	70	.	563		NE	II	2910.9133	2910.0609	90	.	389	
NE	II	2694.339	2693.539	50	.	563		NE	II	2911.2599	2910.4075	90	.	389	
NE	II	2695.618	2694.819	50	.	563		NE	II	2911.991	2911.138	80	.	563	
NE	II	2696.520	2695.720	40	.	563		NE	II	2912.719	2911.866	30	.	1016	
NE	II	2701.74	2700.94	1	.	1029	Q	NE	II	2915.976	2915.122	80	.	1016	
NE	II	2702.049	2701.248	10	.	563		NE	II	2917.064	2916.210	40	.	1016	
NE	II	2703.457	2702.656	30	.	563		NE	II	2919.613	2918.758	60	.	1016	
NE	II	2703.743	2702.942	5	.	563		NE	II	2922.469	2921.614	20	.	1016	
NE	II	2711.404	2710.601	5	.	563		NE	II	2922.821	2921.966	40	.	1016	
NE	II	2712.256	2711.453	50	.	563		NE	II	2923.855	2923.000	10	.	1016	
NE	II	2712.539	2711.735	30	.	563		NE	II	2926.4744	2925.6182	80	.	389	
NE	II	2713.904	2713.100	50	.	563		NE	II	2928.650	2927.794	30	.	1016	
NE	II	2714.533	2713.729	20	.	563		NE	II	2932.961	2932.103	80	.	1016	
NE	II	2714.702	2713.898	30	.	563		NE	II	2933.053	2932.195	50	.	1016	
NE	II	2722.965	2722.159	40	.	563		NE	II	2934.578	2933.720	40	.	1016	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	II	2936.128	2935.270	5		563		NE	II	3031.676	3030.794	100	17.	1016	
NE	II	2941.513	2940.653	80		1016		NE	II	3031.813	3030.930	10	.	1016	
NE	II	2946.905	2946.044	90		563		NE	II	3035.223	3034.340	60	.	1016	
NE	II	2951.916	2951.054	10		563		NE	II	3035.343	3034.460	120	8.	1016	
NE	II	2951.954	2951.091	10		563		NE	II	3036.8055	3035.9219	100	17.	389	
NE	II	2953.877	2953.014	5		563		NE	II	3037.510	3036.626	80	.	1016	
NE	II	2956.5890	2955.7254	150	8.	389		NE	II	3038.6039	3037.7199	100	8.	389	
NE	II	2961.318	2960.453	70		563		NE	II	3040.4702	3039.5857	100	17.	389	
NE	II	2964.1021	2963.2366	150		389		NE	II	3044.9727	3044.0868	100	17.	389	
NE	II	2968.0495	2967.1831	150		389		NE	II	3046.4418	3045.5558	100	8.	389	
NE	II	2970.274	2969.407	40	.	1016		NE	II	3048.4440	3047.5575	120	8.	389	
NE	II	2973.152	2972.284	80	.	1016		NE	II	3051.361	3050.474	90	.	1016	
NE	II	2973.701	2972.863	70	.	1016		NE	II	3051.651	3050.763	70.	.	1016	
NE	II	2973.867	2972.999	100	.	1016		NE	II	3055.234	3054.346	100	.	1016	
NE	II	2977.431	2976.562	80	.	1016		NE	II	3055.309	3054.421	90	.	1016	
NE	II	2977.486	2976.617	50	.	1016		NE	II	3055.5642	3054.6759	100	8.	389	
NE	II	2980.330	2979.461	100	.	1016		NE	II	3058.753	3057.864	90	.	1016	
NE	II	2980.908	2980.038	90	.	1016		NE	II	3059.9943	3059.1049	100	17.	389	
NE	II	2983.408	2982.538	70	.	1016		NE	II	3060.613	3059.724	80	.	1016	
NE	II	2986.933	2986.062	80	.	1016		NE	II	3062.744	3061.854	50	.	1016	
NE	II	2988.942	2988.070	10	.	1016		NE	II	3063.382	3062.491	100	.	1016	
NE	II	2989.755	2988.883	80	.	1016		NE	II	3064.191	3063.301	100	.	1016	
NE	II	2992.080	2991.207	30	.	1016		NE	II	3065.447	3064.556	10	.	1016	
NE	II	2992.149	2991.276	50	.	1016		NE	II	3067.574	3066.683	10	.	1016	
NE	II	2994.896	2994.023	80	.	563		NE	II	3068.341	3067.450	80	.	1016	
NE	II	2995.706	2994.833	80	.	1016		NE	II	3071.786	3070.895	100	.	1016	
NE	II	2995.783	2994.909	50	.	563		NE	II	3071.9796	3071.0872	90	17.	389	
NE	II	3000.332	2999.457	10	.	1016		NE	II	3072.422	3071.530	100	.	1016	
NE	II	3000.422	2999.547	10	.	1016		NE	II	3073.195	3072.302	20	.	1016	
NE	II	3002.5432	3001.6681	150	8.	389		NE	II	3073.544	3072.651	90	.	1016	
NE	II	3007.905	3007.029	10	.	1016		NE	II	3074.714	3073.821	70	.	1016	
NE	II	3008.709	3007.832	80	.	1016		NE	II	3075.970	3075.077	10	.	1016	
NE	II	3008.809	3007.933	70	.	1016		NE	II	3076.625	3075.731	100	.	1016	
NE	II	3011.328	3010.451	10	.	1016		NE	II	3077.251	3076.357	90	.	1016	
NE	II	3014.853	3013.975	20	.	1016		NE	II	3078.732	3077.838	80	.	1016	
NE	II	3018.188	3017.310	120	8.	1016		NE	II	3079.482	3078.588	80	.	1016	
NE	II	3027.8972	3027.0159	100	8.	389		NE	II	3082.237	3081.342	90	.	1016	
NE	II	3029.581	3028.700	90	8.	1016		NE	II	3083.509	3082.613	80	.	1016	
NE	II	3029.744	3028.862	120	4.	1016		NE	II	3083.602	3082.706	70	.	1016	
NE	II	3030.595	3029.713	60	.	1016		NE	II	3084.915	3084.019	30	.	1016	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NE	II	3085.814	3084.918	80	.	1016		NE	II	3149.583	3148.672	100	.	1016	
NE	II	3086.976	3086.080	70	.	1016		NE	II	3152.0495	3151.1370	90	16.	389	
NE	II	3087.078	3086.182	10	.	1016		NE	II	3152.509	3151.596	40	.	1016	
NE	II	3089.062	3088.165	120	24.	1016		NE	II	3154.591	3153.678	70	.	1016	
NE	II	3089.174	3088.276	80	.	1016		NE	II	3155.7070	3154.7936	70	13.	389	
NE	II	3092.991	3092.094	100	.	1016		NE	II	3155.906	3154.993	3	.	896	
NE	II	3093.800	3092.902	120	44.	1016		NE	II	3157.246	3156.333	10	.	1016	
NE	II	3094.9040	3094.0058	100	24.	389		NE	II	3160.852	3159.937	30	.	1016	
NE	II	3096.001	3095.103	100	.	563		NE	II	3164.494	3163.578	30	.	1016	
NE	II	3096.073	3095.175	90	.	1016		NE	II	3165.144	3164.228	20	.	1016	
NE	II	3098.030	3097.131	100	44.	1016		NE	II	3165.3453	3164.4294	100	14.	389	
NE	II	3098.434	3097.535	40	.	1016		NE	II	3165.5798	3164.6638	120	47.	389	
NE	II	3099.727	3098.827	60	.	1016		NE	II	3166.5631	3165.6489	100	14.	389	
NE	II	3100.905	3100.005	10	.	1016		NE	II	3167.0967	3166.1803	70	.	389	
NE	II	3113.721	3112.818	20	.	1016		NE	II	3170.225	3169.308	5	16.	1016	
NE	II	3116.576	3115.672	80	.	1016		NE	II	3173.389	3172.471	80	.	1016	
NE	II	3117.599	3116.695	90	.	1016		NE	II	3174.492	3173.574	90	13.	1016	
NE	II	3117.666	3116.762	90	.	1016		NE	II	3174.589	3173.671	80	.	563	
NE	II	3118.056	3117.153	50	.	1016		NE	II	3177.0389	3176.1201	90	16.	389	
NE	II	3118.699	3117.795	30	.	1016		NE	II	3177.471	3176.552	90	.	1016	
NE	II	3118.885	3117.981	100	16.	1016		NE	II	3178.659	3177.740	50	.	563	
NE	II	3119.064	3118.160	120	.	563		NE	II	3188.4979	3187.5762	90	.	389	
NE	II	3120.377	3119.472	20	.	1016		NE	II	3189.6635	3188.7414	100	13.	389	
NE	II	3121.540	3120.635	20	.	1016		NE	II	3191.786	3190.864	90	14.	1016	
NE	II	3124.273	3123.367	10	.	1016		NE	II	3191.842	3190.920	70	.	563	
NE	II	3124.382	3123.476	70	.	1016		NE	II	3195.5007	3194.5773	100	16.	389	
NE	II	3124.405	3123.500	70	.	1016		NE	II	3199.5106	3198.5861	150	.	389	
NE	II	3125.095	3124.189	90	.	1016		NE	II	3199.8403	3198.9157	60	13.	389	
NE	II	3125.854	3124.948	40	.	1016		NE	II	3209.8929	3208.9655	100	13.	389	
NE	II	3133.0961	3132.1884	90	.	389		NE	II	3210.2832	3209.3560	120	16.	389	
NE	II	3134.974	3134.066	40	.	1016		NE	II	3212.916	3211.989	10	.	1016	
NE	II	3135.040	3134.132	70	.	1016		NE	II	3214.6620	3213.7336	120	13.	389	
NE	II	3136.7235	3135.8148	80	3.	389		NE	II	3215.2563	3214.3278	150	13.	389	
NE	II	3137.385	3136.476	50	3.	1016		NE	II	3215.679	3214.751	80	.	563	
NE	II	3138.970	3138.061	80	.	1016		NE	II	3215.850	3214.921	80	29.	1016	
NE	II	3141.268	3140.358	50	.	1016		NE	II	3219.1221	3218.1926	150	13.	389	
NE	II	3142.2421	3141.3320	120	47.	389		NE	II	3225.747	3224.816	120	43.	1016	
NE	II	3143.215	3142.305	10	.	1016		NE	II	3230.390	3229.458	90	43.	1016	
NE	II	3144.6313	3143.7207	100	24.	389		NE	II	3230.505	3229.573	120	43.	1016	
NE	II	3146.336	3145.425	10	.	1016		NE	II	3231.0011	3230.0686	200	11.	389	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	II	3231.3519	3230.4193	120	11.	389	NE	II	3372.7655	3371.7969	100	17.	389
NE	II	3232.9544	3232.0214	120	11.	389	NE	II	3375.0307	3374.0616	80	12.	389
NE	II	3233.3046	3232.3715	150	11.	389	NE	II	3378.1250	3377.1551	120		389
NE	II	3244.3326	3243.3968	100	15.	389	NE	II	3379.1866	3378.2165	500	7.	389
NE	II	3245.0317	3244.0957	100		389	NE	II	3380.2901	3379.3196	80	12.	389
NE	II	3249.0687	3248.1317	90	15.	389	NE	II	3387.1747	3386.2025	60	12.	389
NE	II	3249.282	3248.345	100		1016	NE	II	3389.3916	3388.4188	150		389
NE	II	3251.290	3250.353	100		1016	NE	II	3389.921	3388.948	120		1016
NE	II	3256.3627	3255.4238	60	23.	389	NE	II	3391.5251	3390.5518	70	12.	389
NE	II	3264.3521	3263.4112	70	15.	389	NE	II	3393.583	3392.609	80	22.	1016
NE	II	3270.8139	3269.8713	90	15.	389	NE	II	3393.766	3392.792	300	7.	1016
NE	II	3271.7428	3270.8000	90	2.	389	NE	II	3394.1566	3393.1826	60		389
NE	II	3276.1235	3275.1796	90	29.	389	NE	II	3398.839	3397.864	50	36.	1016
NE	II	3298.6753	3297.7256	150	2.	389	NE	II	3405.797	3404.821	100	51.	1016
NE	II	3310.6904	3309.7377	150	7.	389	NE	II	3407.923	3406.945	120	51.	1016
NE	II	3311.452	3310.499	30	23.	1016	NE	II	3412.3381	3411.3594	80	45.	389
NE	II	3312.2245	3311.2714	90	2.	389	NE	II	3414.1240	3413.1449	100	45.	389
NE	II	3315.629	3314.675	20	22.	1016	NE	II	3415.8675	3414.8880	70	20.	389
NE	II	3320.6782	3319.7230	300	10.	389	NE	II	3417.8932	3416.9131	120	21.	389
NE	II	3321.1525	3320.1971	80	12.	389	NE	II	3418.669	3417.689	120		1016
NE	II	3324.6903	3323.7340	1000	7.	389	NE	II	3429.6670	3428.6839	120	42.	389
NE	II	3328.1093	3327.1522	150	2.	389	NE	II	3439.9192	3438.9335	90	45.	389
NE	II	3330.1153	3329.1577	100	12.	389	NE	II	3441.7342	3440.7480	70	45.	389
NE	II	3331.6930	3330.7350	60		389	NE	II	3442.964	3441.978	50	36.	1016
NE	II	3335.7952	3334.8361	200	2.	389	NE	II	3444.6934	3443.7065	80	42.	389
NE	II	3337.0519	3336.0925	90	46.	389	NE	II	3454.0572	3453.0679	80	21.	389
NE	II	3345.3577	3344.3961	150	2.	389	NE	II	3455.7618	3454.7720	90		389
NE	II	3346.4156	3345.4538	300	10.	389	NE	II	3457.5983	3456.6080	100	28.	389
NE	II	3346.7908	3345.8289	150	10.	389	NE	II	3458.071	3457.080	70		1016
NE	II	3354.5306	3353.5667	70	23.	389	NE	II	3460.3118	3459.3209	100	51.	389
NE	II	3355.9817	3355.0175	200	2.	389	NE	II	3476.236	3475.240	30	35.	1016
NE	II	3357.2729	3356.3084	90		389	NE	II	3478.6432	3477.6476	80	21.	389
NE	II	3358.7840	3357.8190	120	12.	389	NE	II	3480.514	3479.518	150	49.	1016
NE	II	3361.2372	3360.2716	90	46.	389	NE	II	3481.715	3480.718	200	49.	1016
NE	II	3361.560	3360.595	200	2.	1016	NE	II	3482.9298	3481.9331	200	6.	389
NE	II	3363.127	3362.161	120		1016	NE	III	2063.28	2062.62	40		1031
NE	II	3363.6737	3362.7075	100		389	NE	III	2065.84	2065.18	400		1031
NE	II	3363.906	3362.939	90	12.	1016	NE	III	2079.61	2078.95	300		1031
NE	II	3367.949	3366.982	30		1016	NE	III	2086.22	2085.56	100		1031
NE	II	3368.1839	3367.2166	120	12.	389	NE	III	2087.62	2086.96	200		1031

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NE	111	2088.10	2087.44	140	1031		NE	111	2190.97	2190.29	140	1031	
NE	111	2089.58	2088.92	100	1031		NE	111	2191.84	2191.16	80	1031	M
NE	111	2089.86	2089.20	40	1031	M	NE	111	2192.13	2191.45	20	1031	M
NE	111	2090.09	2089.43	300	1031		NE	111	2193.42	2192.74	140	1031	M
NE	111	2092.56	2091.90	80	1031	M	NE	111	2195.60	2194.92	100	1031	
NE	111	2093.10	2092.44	240	1031		NE	111	2197.79	2197.10	60	1031	
NE	111	2094.30	2093.64	60	1031	M	NE	111	2198.55	2197.86	140	1031	
NE	111	2094.82	2094.15	40	1031	M	NE	111	2201.51	2200.82	100	1031	M
NE	111	2096.21	2095.54	400	1031		NE	111	2201.92	2201.23	80	1031	
NE	111	2096.90	2096.23	240	1031	M	NE	111	2202.91	2202.22	140	1031	
NE	111	2098.09	2097.43	40	1031	M	NE	111	2204.85	2204.16	40	1031	M
NE	111	2098.66	2098.00	20	1031	M	NE	111	2205.67	2204.98	140	1031	
NE	111	2100.00	2099.34	200	1031	M	NE	111	2206.64	2205.95	100	1031	
NE	111	2100.25	2099.59	80	1031	M	NE	111	2207.98	2207.29	160	1031	
NE	111	2103.00	2102.33	40	1031	M	NE	111	2208.73	2208.04	80	1031	
NE	111	2124.94	2124.27	140	1031	M	NE	111	2210.04	2209.35	200	1031	
NE	111	2130.21	2129.54	120	1031	M	NE	111	2212.54	2211.85	200	1031	
NE	111	2150.59	2149.92	120	1031		NE	111	2213.32	2212.63	100	1031	
NE	111	2151.37	2150.70	160	1031		NE	111	2214.45	2213.76	240	1031	
NE	111	2151.93	2151.26	100	1031		NE	111	2215.46	2214.77	80	1031	
NE	111	2152.46	2151.78	60	1031		NE	111	2216.76	2216.07	300	1031	
NE	111	2153.83	2153.15	40	1031		NE	111	2262.86	2262.16	40	1031	
NE	111	2160.12	2159.44	100	1031		NE	111	2263.91	2263.21	240	1031	
NE	111	2160.28	2159.60	80	1031		NE	111	2264.81	2264.11	60	1031	
NE	111	2161.56	2160.88	40	1031		NE	111	2265.61	2264.91	200	1031	
NE	111	2161.72	2161.04	120	1031		NE	111	2266.86	2266.16	160	1031	
NE	111	2161.90	2161.22	200	1031		NE	111	2267.68	2266.98	100	1031	
NE	111	2164.45	2163.77	300	1031		NE	111	2274.34	2273.64	400	1031	M
NE	111	2177.35	2176.67	100	1031		NE	111	2279.68	2278.98	200	1031	M
NE	111	2178.41	2177.73	160	1031		NE	111	2299.67	2298.96	20	1031	M
NE	111	2179.37	2178.69	80	1031		NE	111	2301.09	2300.38	40	1031	M
NE	111	2181.57	2180.89	200	1031		NE	111	2304.65	2303.94	60	1031	M
NE	111	2182.96	2182.28	60	1031		NE	111	2305.58	2304.87	80	1031	M
NE	111	2183.92	2183.24	40	1031		NE	111	2306.21	2305.50	40	1031	M
NE	111	2187.30	2186.62	60	1031	M	NE	111	2307.32	2306.61	120	1031	M
							NE	111	2307.98	2307.27	40	1031	M
							NE	111	2366.10	2365.38	200	1031	M
							NE	111	2366.46	2365.74	120	1031	M
							NE	111	2367.74	2367.02	140	1031	M
							NE	111	2367.74	2367.02	250	1024	M

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	III	2413.46	2412.73	300		1031		NE	III	2823.78	2822.95	140		1031	
NE	III	2413.67	2412.94	240		1031		NE	III	2825.30	2824.47	60		1031	
NE	III	2413.91	2413.18	160		1031		NE	III	2826.11	2825.28	80		1031	
NE	III	2414.27	2413.54	120		1031		NE	III	2826.65	2825.82	100		1031	
NE	III	2414.51	2413.78	200		1031		NE	III	2867.49	2866.65	100		1031	M
NE	III	2423.7	2423.0	30		885	M	NE	III	2906.70	2905.85	80		1031	M
NE	III	2455.72	2454.98	100		1031		NE	III	2996.1	2995.2	56		885	M
NE	III	2458.29	2457.55	40		1031		NE	III	3283.6	3282.7	M		885	M
NE	III	2463.09	2462.35	120		1031									
NE	III	2464.12	2463.38	40		1031									
NE	III	2468.95	2468.20	80		1031		NE	IV	2019.092	2018.441	90		71	
NE	III	2474.15	2473.40	200		1031		NE	IV	2022.842	2022.192	160		71	
NE	III	2590.8	2590.0	154	11.	885		NE	IV	2204.57	2203.88	50		1022	
NE	III	2594.4	2593.6	107	11.	885		NE	IV	2221.50	2220.81	10		1022	
NE	III	2596.5	2595.7	69	11.	885		NE	IV	2258.72	2258.02	360		71	
NE	III	2610.81	2610.03	300		1031		NE	IV	2262.78	2262.08	250		71	
NE	III	2612.20	2611.42	80		1031		NE	IV	2265.24	2264.54	160		71	
NE	III	2614.19	2613.41	240		1031		NE	IV	2286.49	2285.79	800		1024	
NE	III	2615.29	2614.51	80		1031		NE	IV	2293.85	2293.14	50		1024	
NE	III	2616.65	2615.87	200		1031		NE	IV	2294.20	2293.49	350		1024	
NE	III	2639.49	2638.70	200		1031		NE	IV	2351.56	2350.84	350		1024	
NE	III	2639.97	2639.18	100		1031		NE	IV	2353.24	2352.52	600		1024	
NE	III	2641.35	2640.56	120		1031		NE	IV	2358.68	2357.96	1000		1024	
NE	III	2641.86	2641.07	200		1031		NE	IV	2363.40	2362.68	350		1024	
NE	III	2643.04	2642.25	40		1031		NE	IV	2364.00	2363.28	350		1024	
NE	III	2643.21	2642.42	60		1031		NE	IV	2366.21	2365.49	150		1024	
NE	III	2678.65	2677.90	150	12.	488		NE	IV	2372.88	2372.16	500		1024	
NE	III	2679.43	2678.64	125	12.	488		NE	IV	2373.93	2373.21	800		1024	
NE	III	2765.19	2764.38	20		1031	M	NE	IV	2384.93	2384.20	100		1024	
NE	III	2765.51	2764.70	40		1031	M	NE	IV	2385.68	2384.95	500		1024	
NE	III	2766.89	2766.07	20		1031	M	NE	IV	2405.01	2404.28	1		1024	
NE	III	2767.84	2767.02	40		1031	M	NE	IV	2405.92	2405.19	10		1024	
NE	III	2778.47	2777.65	140		1031		NE	IV	2486.6	2485.9	65		885	M
NE	III	2783.85	2783.03	40		1031		NE	IV	2505.7	2504.9	50		885	M
NE	III	2786.11	2785.29	100		1031		NE	IV	2511.2	2510.4	45		885	M
NE	III	2786.99	2786.17	40		1031		NE	IV	2521.3	2520.5	41		885	M
NE	III	2787.71	2786.89	60		1031		NE	IV	2621.2	2620.4	40		885	M
NE	III	2788.55	2787.73	80		1031		NE	IV	2895.4	2894.6	43		885	M
NE	III	2801.07	2800.24	60		1031		NE	IV	2898.8	2898.0	30		885	M
NE	III	2803.17	2802.34	40		1031		NE	IV	2902.8	2902.0	38		885	M
								NE	IV	3049.1	3048.2	35		885	M

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NE	V	2224.81	2224.12	10	1024		NE	VI	2290.07	2289.36	10	1024	
NE	V	2228.11	2227.42	120	1024		NE	VI	2294.3	2293.6	350	1022	Q
NE	V	2233.10	2232.41	150	1022		NE	VI	2554.5	2553.7	87	885	M
NE	V	2236.99	2236.29	50	1024		NE	VI	2557.7	2556.9	115	885	M
NE	V	2246.18	2245.48	100	1024		NE	VI	2570.0	2569.2	478	885	M
NE	V	2256.75	2256.05	10	1024		NE	VI	3134.1	3133.2	30	885	M
NE	V	2260.27	2259.57	100	1022		NE	VI	3135.9	3135.0	64	885	M
NE	V	2264.09	2263.39	100	1024		NE	VI	3137.3	3136.4	64	885	M
NE	V	2266.39	2265.71	350	1022		NE	VI	3140.6	3139.7	37	885	M
NE	V	2275.25	2274.54	1	1024		NE	VI	3308.5	3307.6	38	885	M
NE	V	2283.31	2282.61	10	1022		NE	VI	3320.4	3319.4	38	885	M
NE	V	2307.02	2306.31	50	1024		NE	VI	3399.9	3398.9	57	885	M
NE	V	2851.1	2850.3	100	885	M	NE	VI	3402.9	3401.9	39	885	M
NE	V	2875.6	2874.8	70	885	M	NE	VI	3409.1	3408.1	144	885	M
NE	V	2961.5	2960.6	111	885	M	NE	VI	3422.4	3421.4	78	885	M
NE	V	2966.5	2965.6	120	885	M	NE	VI	3425.7	3424.7	243	885	M
NE	V	2968.4	2967.5	185	885	M	NE	VI	3427.0	3426.1	351	885	M
NE	V	2971.1	2970.2	96	885	M	NE	VI	3430.3	3429.3	126	885	M
NE	V	2975.7	2974.8	108	885	F	NE	VI	3434.7	3433.7	165	885	M
NE	V	2976.4	2975.5	120	885	M	NE	VII	2517.1	2516.3	109	885	M
NE	V	2978.2	2977.3	107	885	M	NE	VII	3438.8	3437.8	214	885	M
NE	V	2981.5	2980.6	80	885	M	NE	VII	3644.6	3643.6		1011	
NE	V	2983.8	2982.9	72	885	M	NE	VIII	2821.5	2820.7		1011	
NE	V	2987.2	2986.3	91	885	M	NE	VIII	2860.9	2860.1		1011	
NE	V	2993.3	2992.4	48	885	M	NE	I	2001.14	2000.49	5	43.	488
NE	V	2996.1	2995.2	46	885	M	NE	I	2002.48	2001.83	20	44.	488
NE	V	2999.9	2999.0	67	885	M	NE	I	2007.66	2007.01	35	46.	488
NE	V	3004.6	3003.7	33	885	M	NE	I	2008.34	2007.69	20	23.	488
NE	V	3266.9	3266.0	58	885	M	NE	I	2014.90	2014.25	60	47.	488
NE	V	3268.4	3267.5	19	885	M	NE	I	2017.01	2016.36	00	45.	488
NE	V	3301.0	3300.1		108	F	NE	I	2021.97	2021.32	0		602
NE	V	3346.79	3345.83		108	F	NE	I	2025.02	2024.37	0		602
NE	V	3426.85	3425.97		108	F	NE	I	2026.05	2025.40	50	22.	488
NE	VI	2043.04	2042.38	90	71		NE	I	2026.50	2025.84	0		602
NE	VI	2056.59	2055.93	90	71		NE	I	2027.06	2026.41	5		602
NE	VI	2247.6	2246.9	155	885	M	NE	I	2027.27	2026.62	100	19.	488
NE	VI	2248.46	2247.76	10	71		NE	I	2029.94	2029.29	15	44.	488
NE	VI	2253.92	2253.22	90	71		NE	I	2030.54	2029.88	0		602
							NE	I	2034.21	2033.56	10	39.	488

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	I	2035.09	2034.44	50	43.	488		NI	I	2075.27	2074.61	0		602	
NI	I	2035.55	2034.90	25	23.	488		NI	I	2075.75	2075.09	00		602	
NI	I	2035.72	2035.07	100	43.	488		NI	I	2076.73	2076.07	10	42.	488	
NI	I	2041.81	2041.16	10	46.	488		NI	I	2077.88	2077.22	0		602	
NI	I	2042.83	2042.17	00		602		NI	I	2083.53	2082.87	40	19.	488	
NI	I	2045.07	2044.41	00		602		NI	I	2086.03	2085.37	20	41.	488	
NI	I	2048.01	2047.35	50	42.	488		NI	I	2086.23	2085.57	5	65.	488	
NI	I	2048.46	2047.80	00		602		NI	I	2088.42	2087.75	00		602	
NI	I	2048.99	2048.33	0		602		NI	I	2089.64	2088.98	20	40.	488	
NI	I	2051.50	2050.84	25	45.	488		NI	I	2089.75	2089.09	20	19.	488	
NI	I	2052.70	2052.04	60	17.	488		NI	I	2091.08	2090.42	10	17.	488	
NI	I	2053.11	2052.45	10	17.	488		NI	I	2092.35	2091.69	0	39.	488	
NI	I	2054.57	2053.91	5	17.	488		NI	I	2095.80	2095.13	20	65.	488	
NI	I	2056.16	2055.50	75	19.	488		NI	I	2096.20	2095.53	15		488	
NI	I	2060.58	2059.92	60	40.	488		NI	I	2096.42	2095.75	20	18.	488	
NI	I	2060.86	2060.20	40	40.	488		NI	I	2106.52	2105.85	5	43.	488	
NI	I	2061.42	2060.76	5	39.	488		NI	I	2107.88	2107.21	0	62.	488	
NI	I	2063.03	2062.37	25	22.	488		NI	I	2110.46	2109.79	10	17.	488	
NI	I	2064.08	2063.42	50	43.	488		NI	I	2112.40	2111.73	25	17.	488	
NI	I	2065.05	2064.39	40	40.	488		NI	I	2115.10	2114.43	20	64.	488	
NI	I	2069.01	2068.35	00		602		NI	I	2122.07	2121.40	40	38.	488	
NI	I	2069.28	2068.62	20	39.	488		NI	I	2122.92	2122.25	5	41.	488	
NI	I	2069.70	2069.04	50		488	N	NI	I	2124.78	2124.10	0		602	
NI	I	2070.18	2069.52	40	43.	488		NI	I	2125.47	2124.80	15	63.	488	
NI	I	2072.92	2072.26	15	21.	488		NI	I	2126.29	2125.62	25	16.	488	
								NI	I	2129.08	2128.41	15	19.	488	
								NI	I	2130.63	2129.96	50	37.	488	
								NI	I	2131.45	2130.78	15		488	
								NI	I	2135.60	2134.93	100	37.	488	
								NI	I	2136.01	2135.34	15	18.	488	
								NI	I	2140.76	2140.09	00		602	
								NI	I	2148.48	2147.80	200	37.	488	
								NI	I	2152.61	2151.93	15	17.	488	
								NI	I	2152.91	2152.23	15	38.	488	
								NI	I	2158.51	2157.83	50	36.	488	
								NI	I	2158.99	2158.31	150	36.	488	
								NI	I	2161.72	2161.04	30	37.	488	
								NI	I	2166.83	2166.15	25	37.	488	
								NI	I	2174.215	2173.535	20	59.	488	
								NI	I	2175.160	2174.480	50	36.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	I	2183.06	2182.38	35	16.	488		NI	I	2278.46	2277.76	10		502	
NI	I	2184.59	2183.91	10	62.	488		NI	I	2288.020	2287.315	5	34.	488	
NI	I	2187.62	2186.94	10	37.	488		NI	I	2289.101	2288.396	20	34.	488	
NI	I	2188.28	2187.60	5	16.	488		NI	I	2290.687	2289.982	100	5.	488	
NI	I	2190.906	2190.223	75	36.	488		NI	I	2293.820	2293.114	25	32.	488	
NI	I	2191.89	2191.21	15	61.	488		NI	I	2301.481	2300.774	100	29.	488	
NI	I	2192.25	2191.56	00		602		NI	I	2302.28	2301.57	10		602	
NI	I	2192.79	2192.10	00		602		NI	I	2303.680	2302.973	50	32.	488	
NI	I	2197.02	2196.34	00		602		NI	I	2308.060	2307.351	15	35.	488	
NI	I	2197.16	2196.47	0		602		NI	I	2311.662	2310.952	500	10.	488	
NI	I	2198.032	2197.347	100	36.	488		NI	I	2313.045	2312.335	250	10.	488	
NI	I	2201.40	2200.71	20	37.	488		NI	I	2314.37	2313.66	10		602	
NI	I	2202.28	2201.59	40	60.	488		NI	I	2314.667	2313.976	500	10.	488	
NI	I	2208.17	2207.48	00		602		NI	I	2317.871	2317.159	250	8.	488	
NI	I	2208.43	2207.74	00	9.	602		NI	I	2319.482	2318.770	5	58.	488	
NI	I	2209.38	2208.69	00		602		NI	I	2320.738	2320.026	500	9.	488	
NI	I	2209.68	2208.99	00		602		NI	I	2322.090	2321.377	300	9.	488	
NI	I	2211.72	2211.03	15	34.	488		NI	I	2322.666	2321.953	5	34.	488	
NI	I	2211.979	2211.292	10	16.	488		NI	I	2323.40	2322.69	10		602	
NI	I	2212.837	2212.149	10	15.	488		NI	I	2325.357	2324.645	10	14.	488	
NI	I	2214.56	2213.87	00		602		NI	I	2326.506	2325.794	250	9.	488	
NI	I	2218.46	2217.77	15	33.	488		NI	I	2330.676	2329.963	250	8.	488	
NI	I	2222.630	2221.939	25	15.	488		NI	I	2332.412	2331.698	10	13.	488	
NI	I	2226.04	2225.35	5	16.	488		NI	I	2337.802	2337.087	5	29.	488	
NI	I	2231.646	2230.955	15	36.	488		NI	I	2338.200	2337.484	250	8.	488	
NI	I	2243.60	2242.90	00		602		NI	I	2338.530	2337.814	5	32.	488	
NI	I	2243.92	2243.22	00	10.	488		NI	I	2339.209	2338.493	10	30.	488	
NI	I	2245.160	2244.464	5	34.	488		NI	I	2346.257	2345.539	150	6.	488	
NI	I	2245.25	2244.55	15		488	N	NI	I	2347.346	2346.628	20	12.	488	
NI	I	2252.180	2251.484	15	33.	488		NI	I	2348.226	2347.507	75	5.	488	
NI	I	2254.261	2253.565	5	34.	488		NI	I	2349.453	2348.734	10	32.	488	
NI	I	2255.507	2254.810	40	14.	488		NI	I	2355.769	2355.050	50	31.	488	
NI	I	2256.570	2255.873	10	9.	488		NI	I	2357.583	2356.864	50	30.	488	
NI	I	2258.843	2258.145	30	32.	488		NI	I	2359.573	2358.853	40	29.	488	
NI	I	2260.260	2259.562	35	32.	488		NI	I	2361.353	2360.633	50	10.	488	
NI	I	2262.123	2261.424	50	13.	488		NI	I	2362.791	2362.070	50	5.	488	
NI	I	2267.048	2266.348	15	33.	488		NI	I	2366.379	2365.657	5	8.	488	
NI	I	2268.255	2267.554	10	10.	488		NI	I	2376.741	2376.016	35	30.	488	
NI	I	2272.653	2271.951	30	35.	488		NI	I	2380.444	2379.720	5	55.	488	
NI	I	2275.363	2274.662	5	9.	488		NI	I	2381.536	2380.812	10	13.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NI	I	2385.115	2384.390	30	10.	488		NI	I	2532.837	2532.076	5	27.	488	
NI	I	2385.737	2385.011	15		488	N	NI	I	2540.780	2540.019	5	53.	488	
NI	I	2387.311	2386.585	50	32.	488		NI	I	2548.172	2547.409	5	52.	488	
NI	I	2388.275	2387.549	20	54.	488		NI	I	2550.295	2549.532	10	51.	488	
NI	I	2393.689	2392.961	75	31.	488		NI	I	2554.138	2553.373	5	4.	488	
NI	I	2393.837	2393.109	5	31.	488		NI	I	2562.191	2561.424	5	3.	488	
NI	I	2397.107	2396.378	15	12.	488		NI	I	2579.235	2578.465	5	28.	488	
NI	I	2397.359	2396.630	15	53.	488		NI	I	2643.932	2643.146	10	72.	488	
NI	I	2402.570	2401.839	100	6.	488		NI	I	2678.820	2678.026	15	69.	488	
NI	I	2413.372	2412.640	50	8.	488		NI	I	2690.478	2689.680	20	71.	488	
NI	I	2420.044	2419.310	100	7.	488		NI	I	2697.284	2696.484	10	49.	488	
NI	I	2421.957	2421.223	35	6.	488		NI	I	2706.263	2705.463	5	48.	488	
NI	I	2424.057	2423.322	20	5.	488		NI	I	2707.321	2706.521	15	70.	488	
NI	I	2424.388	2423.653	20	11.	488		NI	I	2747.555	2746.743	25	26.	488	
NI	I	2424.762	2424.027	25	30.	488		NI	I	2798.821	2797.996	10	73.	488	
NI	I	2429.829	2429.092	5	55.	488		NI	I	2799.476	2798.651	50	26.	488	
NI	I	2432.96	2432.22	10		602		NI	I	2803.096	2802.270	15		488	N
NI	I	2435.150	2434.412	10	53.	488		NI	I	2803.963	2803.140	5	69.	488	
NI	I	2442.403	2441.665	10	31.	488		NI	I	2805.902	2805.078	15	1.	488	
NI	I	2442.555	2441.817	50	31.	488		NI	I	2813.19	2812.37	5		602	
NI	I	2451.206	2450.465	5	57.	488		NI	I	2815.181	2814.354	15	79.	488	
NI	I	2451.716	2450.975	40		488	N	NI	I	2822.120	2821.291	75	25.	488	
NI	I	2454.726	2453.984	20	6.	488		NI	I	2835.380	2834.547	15	2.	488	
NI	I	2466.008	2465.263	10	8.	488		NI	I	2839.785	2838.951	10	68.	488	
NI	I	2467.706	2466.960	5	56.	488		NI	I	2844.882	2844.047	10	67.	488	
NI	I	2472.810	2472.065	30	7.	488		NI	I	2850.659	2849.822	5	77.	488	
NI	I	2472.969	2472.224	5	7.	488		NI	I	2866.337	2865.498	5	26.	488	
NI	I	2473.662	2472.917	20		488	N	NI	I	2869.579	2868.739	5	76.	488	
NI	I	2477.621	2476.875	15	3.	488		NI	I	2876.932	2876.090	10	25.	488	
NI	I	2480.24	2479.49	10		602		NI	I	2879.841	2878.998	15	76.	488	
NI	I	2480.52	2479.77	10		602		NI	I	2906.597	2905.746	5	74.	488	
NI	I	2484.04	2483.29	50		602		NI	I	2908.308	2907.457	15	2.	488	
NI	I	2484.777	2484.028	25	50.	488		NI	I	2914.859	2914.006	10	1.	488	
NI	I	2488.899	2488.149	30		488	N	NI	I	2917.70	2916.85	5		602	
NI	I	2490.257	2489.507	5	27.	488		NI	I	2918.38	2917.53	5		602	
NI	I	2491.440	2490.689	20		488	N	NI	I	2931.763	2930.908	5	78.	488	
NI	I	2491.935	2491.184	20		488	N	NI	I	2944.771	2943.912	125	24.	488	
NI	I	2501.882	2501.128	15		488	N	NI	I	2950.079	2949.218	15		488	N
NI	I	2524.966	2524.208	25	28.	488		NI	I	2959.146	2958.283	5	74.	488	
NI	I	2528.807	2528.048	5	51.	488		NI	I	2970.056	2969.190	5	74.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	I	2974.598	2973.730	5	66.	488		NI	I	3152.170	3151.259	20		1015	N
NI	I	2982.512	2981.645	100	24.	488		NI	I	3155.497	3154.585	10	78.	1015	
NI	I	2984.294	2983.426	20	66.	488		NI	I	3160.434	3159.521	15	11.	1015	
NI	I	2984.999	2984.131	60	12.	1015		NI	I	3165.080	3164.166	10	79.	1015	
NI	I	2991.976	2991.106	20	1.	488		NI	I	3166.423	3165.508	15	21.	1015	
NI	I	2991.976	2991.106	20	75.	488		NI	I	3171.631	3170.715	10	78.	1015	
NI	I	2992.99	2992.12	10	602			NI	I	3177.210	3176.292	10	77.	1015	
NI	I	2993.465	2992.595	100	25.	1015		NI	I	3182.659	3181.740	25	78.	1015	
NI	I	2995.331	2994.460	125	27.	1015		NI	I	3183.958	3183.038	15	78.	1015	
NI	I	3003.357	3002.484	500	24.	488		NI	I	3184.171	3183.251	20	78.	1015	
NI	I	3004.496	3003.622	300	24.	488		NI	I	3185.287	3184.367	40	11.	1015	
NI	I	3012.880	3012.004	375	41.	1015		NI	I	3192.797	3191.875	10	125.	1015	
NI	I	3018.823	3017.947	5	74.	488		NI	I	3194.67	3193.75	K	92.	1015	
NI	I	3020.021	3019.143	100	11.	1015		NI	I	3195.68	3194.76	K	108.	1015	
NI	I	3030.174	3029.293	15	74.	488		NI	I	3196.496	3195.573	30	12.	1015	
NI	I	3032.752	3031.870	50	11.	1015		NI	I	3198.037	3197.113	50	24.	1015	
NI	I	3038.819	3037.935	300	25.	1015		NI	I	3200.266	3199.342	15		1015	N
NI	I	3045.892	3045.006	50	12.	1015		NI	I	3201.348	3200.423	25	23.	1015	
NI	I	3051.703	3050.819	500	25.	1015		NI	I	3203.067	3202.142	25	94.	1015	
NI	I	3055.201	3054.316	250	25.	1015		NI	I	3207.876	3206.952	20	94.	1015	
NI	I	3058.524	3057.638	250	24.	488		NI	I	3210.836	3209.912	25	94.	1015	
NI	I	3064.31	3063.42	15		602		NI	I	3214.348	3213.423	25	91.	1015	
NI	I	3065.507	3064.619	125	24.	488		NI	I	3214.985	3214.059	35	93.	1015	
NI	I	3067.34	3066.46	15		602		NI	I	3217.747	3216.821	25	93.	1015	
NI	I	3076.80	3075.91	10		602		NI	I	3218.757	3217.830	40	91.	1015	
NI	I	3081.647	3080.754	100	24.	488		NI	I	3220.738	3219.811	15	94.	1015	
NI	I	3097.69	3096.80	5		602		NI	I	3222.201	3221.273	25	185.	1015	
NI	I	3098.016	3097.118	75	11.	1015		NI	I	3222.580	3221.652	50	8.	1015	
NI	I	3100.013	3099.115	60	13.	1015		NI	I	3224.462	3223.534	15	92.	1015	
NI	I	3102.453	3101.554	500	25.	1015		NI	I	3224.462	3223.534	15	94.	1015	
NI	I	3102.778	3101.879	200	40.	1015		NI	I	3225.949	3225.020	50	39.	1015	
NI	I	3106.369	3105.469	75	12.	1015		NI	I	3227.913	3226.984	25	7.	1015	
NI	I	3108.615	3107.714	20	12.	1015		NI	I	3232.02	3231.09	K	106.	1015	
NI	I	3115.027	3114.124	100	24.	1015		NI	I	3233.094	3232.963	125	7.	1015	
NI	I	3117.618	3116.714	10	95.	1015		NI	I	3234.105	3233.174	20	91.	1015	
NI	I	3119.46	3118.56	K	94.	1015		NI	I	3234.105	3233.174	20	184.	1015	
NI	I	3130.218	3129.314	35	12.	1015		NI	I	3234.81	3233.88	10		1015	N
NI	I	3135.014	3134.108	300	25.	1015		NI	I	3235.581	3234.649	50	21.	1015	
NI	I	3146.030	3145.121	15	7.	1015		NI	I	3236.685	3235.753	20	11.	1015	
NI	I	3146.628	3145.719	40	11.	1015		NI	I	3243.992	3243.058	125	22.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	I	3246.305	3245.370	20	108.	1015		NI	I	3336.55	3335.59	10		1015	N
NI	I	3249.393	3248.457	40	21.	1015		NI	I	3337.972	3337.014	20	17.	1015	
NI	I	3250.376	3249.440	30	10.	1015		NI	I	3338.32	3337.36	K	122.	1015	
NI	I	3251.679	3250.743	45	39.	1015		NI	I	3339.716	3338.758	15	54.	1015	
NI	I	3265.38	3264.44	10		1015	N	NI	I	3340.008	3339.050	20	104.	1015	
NI	I	3269.005	3268.064	20		1015	N	NI	I	3360.070	3359.106	40	108.	1015	
NI	I	3269.912	3268.971	10	91.	1015		NI	I	3362.206	3361.241	25	107.	1015	
NI	I	3272.060	3271.118	50	23.	1015		NI	I	3362.521	3361.556	100	19.	1015	
NI	I	3272.11	3271.17	K	108.	1015		NI	I	3363.771	3362.806	30	23.	1015	
NI	I	3274.44	3273.50	5	108.	1015		NI	I	3364.579	3363.613	20	105.	1015	
NI	I	3276.54	3275.60	K	107.	1015		NI	I	3365.557	3364.591	25	107.	1015	
NI	I	3278.17	3277.23	5	90.	1015		NI	I	3366.734	3365.768	75	38.	1015	
NI	I	3282.825	3281.880	25	106.	1015		NI	I	3367.124	3366.168	100	8.	1015	
NI	I	3283.641	3282.696	40	7.	1015		NI	I	3367.773	3366.807	50	108.	1015	
NI	I	3283.772	3282.827	25	106.	1015		NI	I	3368.26	3367.29	K	96.	1015	
NI	I	3285.378	3284.432	20	96.	1015		NI	I	3368.859	3367.892	40	20.	1015	
NI	I	3287.893	3286.946	40	19.	1015		NI	I	3370.540	3369.573	400	6.	1015	
NI	I	3287.93	3286.98	K	107.	1015		NI	I	3372.961	3371.993	75	7.	1015	
NI	I	3288.168	3287.221	10	55.	1015		NI	I	3375.190	3374.221	75	17.	1015	
NI	I	3294.623	3293.674	20	90.	1015		NI	I	3375.611	3374.642	75	106.	1015	
NI	I	3297.21	3296.26	5		602		NI	I	3376.530	3375.561	10	108.	1015	
NI	I	3298.97	3298.02	K	91.	1015		NI	I	3377.300	3376.331	20	104.	1015	
NI	I	3305.899	3304.950	30	108.	1015		NI	I	3381.544	3380.574	400	37.	1015	
NI	I	3307.962	3307.013	10	107.	1015		NI	I	3381.856	3380.885	75	7.	1015	
NI	I	3309.86	3308.91	K	107.	1015		NI	I	3388.438	3387.466	15	17.	1015	
NI	I	3310.27	3309.32	K	105.	1015		NI	I	3392.023	3391.050	250	5.	1015	
NI	I	3310.378	3309.428	10		1015	N	NI	I	3393.963	3392.992	500	20.	1015	
NI	I	3311.152	3310.202	25	38.	1015		NI	I	3397.156	3396.184	30	122.	1015	
NI	I	3313.271	3312.320	50	106.	1015		NI	I	3398.25	3397.28	10		602	
NI	I	3313.943	3312.992	20	106.	1015		NI	I	3402.139	3401.166	40	107.	1015	
NI	I	3316.615	3315.663	150	22.	1015		NI	I	3404.406	3403.432	40	108.	1015	
NI	I	3321.210	3320.257	100	9.	1015		NI	I	3406.47	3405.50	K	122.	1015	
NI	I	3321.732	3320.779	30	108.	1015		NI	I	3410.553	3409.578	40	5.	1015	
NI	I	3322.195	3321.242	10	92.	1015		NI	I	3413.45	3412.47	5	90.	1015	
NI	I	3323.264	3322.310	75	39.	1015		NI	I	3414.44	3413.46	K	124.	1015	
NI	I	3327.625	3326.670	20	108.	1015		NI	I	3414.455	3413.478	125	5.	1015	
NI	I	3328.347	3327.392	20	90.	1015		NI	I	3414.916	3413.939	60	17.	1015	
NI	I	3329.670	3328.714	25	20.	1015		NI	I	3415.742	3414.765	750	19.	1015	
NI	I	3332.22	3331.26	K	107.	1015		NI	I	3416.65	3415.67	K	123.	1015	
NI	I	3333.137	3332.180	30		1015	N	NI	I	3421.720	3420.741	25	9.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	I	3422.20	3421.22	K	105.	1015		NI	II	2004.123	2003.475	3		835	
NI	I	3422.321	3421.342	35	122.	1015		NI	II	2004.460	2003.812	1		835	
NI	I	3423.311	3422.332	20	105.	1015		NI	II	2004.914	2004.266	50	33.	835	
NI	I	3423.857	3422.878	20	122.	1015		NI	II	2010.411	2009.761	2		835	
NI	I	3424.691	3423.711	250	20.	1015		NI	II	2012.797	2012.148	4		835	
NI	I	3429.40	3428.42	K	123.	1015		NI	II	2015.648	2014.998	2		835	
NI	I	3434.540	3433.558	350	19.	1015		NI	II	2019.683	2019.032	50	43.	835	
NI	I	3436.472	3435.489	10	53.	1015		NI	II	2020.399	2019.748	5		835	
NI	I	3443.029	3442.044	25	104.	1015		NI	II	2021.632	2020.981	50	43.	835	
NI	I	3443.544	3442.559	20	124.	1015		NI	II	2028.787	2028.135	3		835	
NI	I	3443.92	3442.93	10		602		NI	II	2029.165	2028.513	6		835	
NI	I	3443.98	3443.00	5		602		NI	II	2029.750	2029.098	2		835	
NI	I	3445.236	3444.251	25	122.	1015		NI	II	2029.859	2029.207	50	43.	835	
NI	I	3447.249	3446.263	500	20.	1015		NI	II	2032.957	2032.304	25	33.	835	
NI	I	3453.878	3452.890	200	17.	1015		NI	II	2034.045	2033.391	3	15.	835	
NI	I	3459.463	3458.474	625	19.	1015		NI	II	2036.040	2035.386	2		835	
NI	I	3462.642	3461.652	625	17.	1015		NI	II	2038.264	2037.611	2		835	
NI	I	3463.80	3462.82	10		602		NI	II	2051.012	2050.355	1		835	
NI	I	3465.11	3464.12	5		602		NI	II	2053.957	2053.300	5	15.	835	
NI	I	3468.11	3467.12	5	123.	1015		NI	II	2054.971	2054.313	20	32.	835	
NI	I	3468.724	3467.732	20	123.	1015		NI	II	2056.237	2055.579	1		835	
NI	I	3470.479	3469.486	75	8.	1015		NI	II	2058.035	2057.376	1	16.	835	
NI	I	3472.62	3471.63	K.	124.	1015		NI	II	2058.138	2057.480	0		835	
NI	I	3473.539	3472.545	350	20.	1015		NI	II	2058.497	2057.838	1		835	
NI	I	3477.62	3476.63	10	123.	1015		NI	II	2061.479	2060.820	0		835	
NI	I	3478.851	3477.864	10	124.	1015		NI	II	2064.885	2064.225	2		835	
NI	I	3480.255	3479.264	15	105.	1015		NI	II	2067.077	2066.417	3	15.	835	
NI	I	3481.179	3480.183	20	123.	1015		NI	II	2067.709	2067.049	5		835	
NI	I	3481.179	3480.183	20	124.	1015		NI	II	2069.791	2069.130	1		835	
NI	I	3483.73	3482.73	5	120.	1015		NI	II	2070.240	2069.579	6		835	
NI	I	3484.62	3483.62	K	120.	1015		NI	II	2070.601	2069.940	18		835	
NI	I	3484.771	3483.774	125	6.	1015		NI	II	2071.881	2071.220	30		835	
NI	I	3486.885	3485.888	50	17.	1015		NI	II	2074.799	2074.138	1	42.	835	
NI	I	3489.291	3488.293	10	121.	1015		NI	II	2078.678	2078.016	3		835	
NI	I	3501.850	3500.852	125	6.	1015		NI	II	2079.837	2079.174	30		835	
NI	I	3572.888	3571.869	250	5.	1015		NI	II	2081.513	2080.850	20	16.	835	
								NI	II	2082.001	2081.338	2		835	
								NI	II	2083.268	2082.605	4		835	
								NI	II	2084.313	2083.649	1	14.	835	
								NI	II	2084.433	2083.770	5	32.	835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2085.539	2084.875	30	42.	835		NI	II	2118.164	2117.494	1		835	
NI	II	2085.979	2085.315	25		835		NI	II	2119.533	2118.863	2		835	
NI	II	2086.318	2085.654	50		835		NI	II	2121.252	2120.582	6		835	
NI	II	2087.183	2086.519	20		835		NI	II	2121.586	2120.915	0		835	
NI	II	2088.336	2087.672	7		835		NI	II	2122.440	2121.769	1		835	
NI	II	2088.876	2088.212	1		835		NI	II	2122.666	2121.995	0		835	
NI	II	2089.665	2089.000	35		835		NI	II	2123.145	2122.474	25		835	
NI	II	2090.768	2090.103	15	15.	835	H	NI	II	2123.261	2122.590	2		835	
NI	II	2092.807	2092.142	3		835		NI	II	2123.391	2122.720	0		835	
NI	II	2093.505	2092.840	3		835		NI	II	2123.969	2123.298	50		835	
NI	II	2094.131	2093.466	15		835		NI	II	2124.507	2123.836	3		835	
NI	II	2094.220	2093.555	20	15.	835	H	NI	II	2125.702	2125.030	10		835	
NI	II	2094.754	2094.128	15		835		NI	II	2125.793	2125.122	40	14.	835	H
NI	II	2095.013	2094.348	1		835		NI	II	2126.586	2125.914	25	13.	835	
NI	II	2095.053	2094.388	7		835		NI	II	2127.510	2126.838	180		835	
NI	II	2096.518	2095.852	1		835		NI	II	2128.357	2127.685	1		835	
NI	II	2096.972	2096.306	0		835		NI	II	2128.449	2127.777	40	41.	835	
NI	II	2097.760	2097.094	140	31.	335	H	NI	II	2129.255	2128.583	70	15.	835	H
NI	II	2099.034	2098.368	10		835		NI	II	2129.734	2129.061	1		835	
NI	II	2099.816	2099.150	0		835		NI	II	2129.813	2129.141	3	31.	835	
NI	II	2100.280	2099.614	12		835		NI	II	2130.195	2129.523	8		835	
NI	II	2100.335	2099.668	6		835		NI	II	2130.845	2130.172	0		835	
NI	II	2100.591	2099.925	13		835		NI	II	2131.300	2130.628	3		835	
NI	II	2100.907	2100.240	3		835		NI	II	2131.719	2131.046	60	31.	835	
NI	II	2100.975	2100.308	60		835		NI	II	2131.772	2131.099	180		835	
NI	II	2101.885	2101.218	3		835		NI	II	2131.938	2131.265	35	14.	835	H
NI	II	2103.516	2102.849	1		835		NI	II	2132.043	2131.370	1		835	
NI	II	2104.059	2103.392	20	31.	835		NI	II	2133.026	2132.353	1		835	
NI	II	2107.605	2106.937	0		835		NI	II	2134.190	2133.517	50		835	
NI	II	2108.494	2107.826	1		835		NI	II	2134.963	2134.289	50	31.	835	
NI	II	2108.622	2107.954	140		835		NI	II	2135.048	2134.375	10		835	
NI	II	2109.691	2109.023	18	60.	835		NI	II	2135.114	2134.441	15		835	
NI	II	2112.087	2111.418	2	60.	835		NI	II	2135.433	2134.760	20		835	
NI	II	2113.119	2112.450	50		835		NI	II	2135.801	2135.127	160		835	
NI	II	2113.969	2113.300	0		835		NI	II	2137.296	2136.622	10		835	
NI	II	2114.248	2113.579	80	60.	835		NI	II	2138.817	2138.143	25		835	
NI	II	2114.343	2113.674	4		835		NI	II	2139.256	2138.582	50	13.	835	H
NI	II	2115.846	2115.176	3		835		NI	II	2139.759	2139.085	0		835	
NI	II	2116.898	2116.228	0		835		NI	II	2140.343	2139.668	1		835	
NI	II	2117.488	2116.818	1		835		NI	II	2140.411	2139.710	20		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2141.859	2141.184	12		835		NI	II	2175.078	2174.396	30		835	
NI	II	2142.744	2142.069	10		835		NI	II	2175.348	2174.666	440	14.	835	H
NI	II	2143.128	2142.453	3		835		NI	II	2175.829	2175.147	390	13.	835	H
NI	II	2143.840	2143.165	20		835		NI	II	2176.514	2175.832	30		835	
NI	II	2145.634	2144.958	1		835		NI	II	2176.783	2176.101	7		835	
NI	II	2145.827	2145.152	30		835		NI	II	2177.478	2176.796	2		835	
NI	II	2146.285	2145.609	2		835		NI	II	2177.768	2177.086	220	40.	835	H
NI	II	2153.058	2152.381	4		835		NI	II	2178.043	2177.361	200	40.	835	
NI	II	2153.126	2152.449	16		835		NI	II	2178.213	2177.531	25		835	
NI	II	2156.313	2155.635	35		835		NI	II	2178.529	2177.847	25		835	
NI	II	2157.190	2156.512	8		835		NI	II	2179.792	2179.110	12		835	
NI	II	2157.619	2156.941	25		835		NI	II	2180.035	2179.352	200	40.	835	H
NI	II	2158.168	2157.490	1		835		NI	II	2180.155	2179.453	20	12.	835	
NI	II	2158.414	2157.736	18		835		NI	II	2180.673	2179.990	50	30.	835	
NI	II	2158.560	2157.882	20		835		NI	II	2181.156	2180.473	280	40.	835	H
NI	II	2159.145	2158.467	5		835		NI	II	2181.818	2181.135	1		835	
NI	II	2159.419	2158.741	50	13.	835	H	NI	II	2183.901	2183.217	80		835	
NI	II	2159.721	2159.043	100		835		NI	II	2184.952	2184.268	7		835	
NI	II	2160.376	2159.698	25		835		NI	II	2185.289	2184.605	280	13.	835	H
NI	II	2161.896	2161.217	80	14.	835	H	NI	II	2185.559	2184.875	35		835	
NI	II	2162.471	2161.792	18		835		NI	II	2186.188	2185.504	500	40.	835	H
NI	II	2162.664	2161.984	11		835		NI	II	2186.804	2186.120	20		835	
NI	II	2163.160	2162.481	18		835		NI	II	2187.577	2186.893	18		835	
NI	II	2163.887	2163.208	50		835		NI	II	2187.999	2187.315	25		835	
NI	II	2164.200	2163.521	1		835		NI	II	2188.380	2187.696	2		835	
NI	II	2164.781	2164.102	10		835		NI	II	2188.729	2188.045	25	12.	835	H
NI	II	2165.958	2165.278	30		835		NI	II	2189.226	2188.541	25		835	
NI	II	2166.233	2165.553	320	13.	835	H	NI	II	2189.602	2188.918	2		835	
NI	II	2166.922	2166.242	70		835		NI	II	2189.859	2189.174	4		835	
NI	II	2167.368	2166.688	25		835		NI	II	2190.183	2189.498	45		835	
NI	II	2167.936	2167.256	30		835		NI	II	2191.242	2190.557	80		835	
NI	II	2167.979	2167.299	120		835		NI	II	2191.652	2190.967	30	29.	835	
NI	II	2168.495	2167.815	50		835		NI	II	2192.721	2192.036	100		835	
NI	II	2168.893	2168.212	50		835		NI	II	2192.775	2192.090	540		835	
NI	II	2169.166	2168.486	80		835		NI	II	2193.026	2192.341	120		835	
NI	II	2169.776	2169.096	440	13.	835	H	NI	II	2193.694	2193.009	1		835	
NI	II	2170.250	2169.569	40		835		NI	II	2194.220	2193.534	50		835	
NI	II	2170.636	2169.955	180		835		NI	II	2198.541	2197.854	25		835	
NI	II	2174.800	2174.119	6		835		NI	II	2198.622	2197.936	140		835	
NI	II	2175.012	2174.331	10		835		NI	II	2199.110	2198.423	110		835	

SPECTRUM		VACUUM WAVELENGTH, Å	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2199.875	2199.188	20		835		NI	II	2219.807	2219.116	20		835	
NI	II	2201.715	2201.028	25		835		NI	II	2219.937	2219.246	1		835	
NI	II	2202.096	2201.409	240	13.	835	H	NI	II	2220.163	2219.472	140		835	
NI	II	2203.756	2203.068	40		835		NI	II	2220.627	2219.936	2		835	
NI	II	2204.061	2203.373	25		835		NI	II	2221.093	2220.402	280	28.	835	H
NI	II	2204.155	2203.468	60		835		NI	II	2221.753	2221.062	220		835	
NI	II	2205.487	2204.799	10		835		NI	II	2222.450	2221.759	25		835	
NI	II	2206.236	2205.548	700		835		NI	II	2222.928	2222.236	110		835	
NI	II	2206.471	2205.783	20		835		NI	II	2223.649	2222.957	300	12.	835	H
NI	II	2206.554	2205.866	80		835		NI	II	2224.147	2223.455	180		835	
NI	II	2207.009	2206.321	5		835		NI	II	2224.311	2223.619	15		835	
NI	II	2207.403	2206.715	620	13.	835	H	NI	II	2225.019	2224.327	5		835	
NI	II	2207.649	2206.961	20		835		NI	II	2225.047	2224.355	10	21.	835	H
NI	II	2207.669	2206.981	30		835		NI	II	2225.106	2224.414	15		835	H
NI	II	2207.836	2207.148	1		935		NI	II	2225.196	2224.504	5	29.	835	
NI	II	2207.951	2207.262	20		835		NI	II	2225.556	2224.864	140	12.	835	H
NI	II	2209.729	2209.040	1		835		NI	II	2226.460	2225.768	50		835	
NI	II	2209.800	2209.111	25		835		NI	II	2227.021	2226.329	100	12.	835	H
NI	II	2209.949	2209.260	50		835		NI	II	2227.558	2226.866	5		835	
NI	II	2210.690	2210.001	20		835		NI	II	2227.879	2227.186	40		835	
NI	II	2210.927	2210.238	6		835		NI	II	2228.365	2227.672	15		835	
NI	II	2211.071	2210.382	180	13.	835	H	NI	II	2230.469	2229.776	50	51.	835	H
NI	II	2211.786	2211.097	180	52.	835	H	NI	II	2231.001	2230.308	2		835	
NI	II	2212.319	2211.630	25		835		NI	II	2231.061	2230.368	2		835	
NI	II	2212.799	2212.109	120		835		NI	II	2234.503	2233.809	20		835	
NI	II	2213.362	2212.673	P		835		NI	II	2236.453	2235.758	8		835	
NI	II	2213.562	2212.872	20		835		NI	II	2236.758	2236.063	3	53.	835	
NI	II	2213.606	2212.917	40		835		NI	II	2237.261	2236.566	8		835	
NI	II	2213.756	2213.066	12		835		NI	II	2237.679	2236.984	2		835	
NI	II	2213.845	2213.155	50		835		NI	II	2237.856	2237.161	1		835	
NI	II	2213.886	2213.196	120	30.	835	H	NI	II	2238.498	2237.803	5		835	
NI	II	2214.179	2213.489	1		835		NI	II	2238.571	2237.876	20		835	
NI	II	2215.585	2214.895	20		835		NI	II	2238.728	2238.033	2		835	
NI	II	2215.965	2215.275	6		835		NI	II	2239.147	2238.452	20		835	
NI	II	2217.172	2216.482	800	12.	835	H	NI	II	2239.267	2238.572	15		835	
NI	II	2218.385	2217.695	40		835		NI	II	2240.695	2239.999	20		835	
NI	II	2218.736	2218.045	5		835		NI	II	2240.880	2240.185	15		835	
NI	II	2218.802	2218.111	120		835		NI	II	2242.267	2241.571	140		835	
NI	II	2218.898	2218.207	1		835		NI	II	2242.727	2242.031	100		835	
NI	II	2219.264	2218.573	2		835		NI	II	2242.837	2242.141	2	28.	835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2243.376	2242.680	220		835		NI	II	2264.075	2263.375	3		835	
NI	II	2244.411	2243.715	10		835		NI	II	2264.144	2263.443	5		835	
NI	II	2245.555	2244.858	60		835		NI	II	2265.162	2264.461	320	12.	835	H
NI	II	2245.574	2244.878	30		835		NI	II	2265.440	2264.739	50		835	
NI	II	2246.292	2245.596	20		835		NI	II	2266.046	2265.345	30	39.	835	
NI	II	2247.308	2246.611	2		835		NI	II	2267.348	2266.647	30		835	
NI	II	2247.925	2247.228	100	10.	835		NI	II	2267.604	2266.903	10		835	
NI	II	2249.066	2248.369	15		835		NI	II	2267.739	2267.038	5		835	
NI	II	2249.724	2249.027	0		835		NI	II	2267.937	2267.236	100		835	
NI	II	2250.069	2249.371	15		835		NI	II	2269.433	2258.732	1		835	
NI	II	2250.141	2249.444	30		835		NI	II	2269.710	2269.008	100		835	
NI	II	2251.185	2250.488	10		835		NI	II	2269.980	2269.278	2		835	
NI	II	2251.263	2250.508	20		835		NI	II	2270.916	2270.214	440.	12.	835	H
NI	II	2251.453	2250.755	10		835		NI	II	2271.436	2270.734	100		835	
NI	II	2251.618	2250.920	3		835		NI	II	2271.788	2271.086	2		835	
NI	II	2251.686	2250.998	3		835		NI	II	2272.545	2271.843	30		835	
NI	II	2252.218	2251.520	30		835		NI	II	2272.954	2272.251	3		835	
NI	II	2253.528	2252.830	140		835		NI	II	2273.567	2272.865	100		835	
NI	II	2254.377	2253.679	50	29.	835		NI	II	2274.761	2274.058	5		835	
NI	II	2254.433	2253.734	25		835		NI	II	2275.298	2274.595	3		835	
NI	II	2254.546	2253.848	220	12.	835		NI	II	2275.427	2274.724	140	38.	835	H
NI	II	2254.956	2254.258	8		835		NI	II	2275.766	2275.063	1		835	
NI	II	2256.311	2255.612	15		835		NI	II	2275.987	2275.284	1		835	
NI	II	2256.330	2255.632	30		835		NI	II	2276.387	2275.684	180	39.	835	H
NI	II	2256.607	2255.908	50		835		NI	II	2276.726	2276.023	120		835	H
NI	II	2256.836	2256.137	75	51.	835		NI	II	2277.140	2276.437	140	51.	835	
NI	II	2256.978	2256.279	3		835		NI	II	2277.375	2276.672	180		835	
NI	II	2257.407	2256.708	5		835		NI	II	2277.985	2277.282	280		835	
NI	II	2258.525	2257.826	140		835		NI	II	2279.022	2278.318	200		835	H
NI	II	2259.203	2258.504	5		835		NI	II	2279.473	2278.770	280	22.	835	H
NI	II	2259.403	2258.704	3		835		NI	II	2280.238	2279.534	1		835	
NI	II	2259.993	2259.294	140		835		NI	II	2280.364	2279.660	15		835	
NI	II	2260.425	2259.726	10		835		NI	II	2281.384	2280.680	3		835	
NI	II	2260.617	2259.917	10		835		NI	II	2281.688	2280.984	75		835	
NI	II	2261.083	2260.383	50		835		NI	II	2282.268	2281.564	30		835	
NI	II	2261.344	2260.644	30		835		NI	II	2283.065	2282.361	8		835	
NI	II	2262.385	2261.685	5		835		NI	II	2285.700	2284.995	2		835	
NI	II	2262.766	2262.066	10		835		NI	II	2285.883	2285.178	50		835	
NI	II	2263.159	2262.459	2		835		NI	II	2286.120	2285.415	5		835	
NI	II	2263.598	2262.898	30	39.	835		NI	II	2286.392	2285.687	25		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2287.558	2286.853	2		835		NI	II	2316.270	2315.558	20		835	
NI	II	2287.794	2287.089	180	22.	835	H	NI	II	2316.554	2315.842	2		835	
NI	II	2288.354	2287.648	220	38.	835	H	NI	II	2316.751	2316.039	320	11.	835	H
NI	II	2289.915	2289.209	6		835		NI	II	2319.034	2318.321	5		835	
NI	II	2294.333	2293.626	4		835		NI	II	2319.221	2318.509	140	38.	835	
NI	II	2295.335	2294.628	1		835		NI	II	2319.964	2319.252	15		835	
NI	II	2296.797	2296.089	100		835		NI	II	2320.463	2319.750	220	37.	835	H
NI	II	2297.259	2296.552	200	21.	835	H	NI	II	2321.724	2321.011	30		835	
NI	II	2297.849	2297.141	200	11.	835	H	NI	II	2321.760	2321.047	15		835	
NI	II	2298.197	2297.489	180	11.	835	H	NI	II	2322.574	2321.861	15		835	
NI	II	2298.443	2297.735	3		835		NI	II	2322.908	2322.195	10		835	
NI	II	2298.978	2298.270	180	21.	835	H	NI	II	2324.254	2323.541	30		835	H
NI	II	2299.125	2298.417	2		835		NI	II	2324.864	2324.094	5		835	
NI	II	2299.199	2298.491	100	39.	835		NI	II	2324.986	2324.272	50		835	
NI	II	2299.766	2299.058	30		835		NI	II	2326.944	2326.230	2		835	
NI	II	2300.359	2299.651	140	27.	835	H	NI	II	2327.165	2326.451	50	11.	835	H
NI	II	2300.805	2300.097	180	27.	835	H	NI	II	2327.241	2326.527	5		835	
NI	II	2301.723	2301.014	20	39.	835		NI	II	2327.349	2326.635	5		835	
NI	II	2302.850	2302.141	1		835		NI	II	2330.268	2329.553	20		835	
NI	II	2303.188	2302.479	140	59.	835	H	NI	II	2330.652	2329.937	40		835	
NI	II	2303.705	2302.996	320	11.	835	H	NI	II	2331.124	2330.409	30		835	
NI	II	2304.397	2303.688	50		835		NI	II	2331.836	2331.121	40		835	
NI	II	2304.463	2303.754	0		835		NI	II	2332.475	2331.760	10		835	
NI	II	2304.557	2303.848	50	51.	835		NI	II	2332.823	2332.108	15		835	
NI	II	2305.949	2305.239	140	38.	835		NI	II	2333.686	2332.970	5		835	
NI	II	2306.737	2306.028	30		835		NI	II	2334.599	2333.883	1		835	
NI	II	2308.491	2307.781	50	38.	835		NI	II	2335.300	2334.584	220	20.	835	H
NI	II	2308.988	2308.278	2		835		NI	II	2335.816	2335.100	15		835	
NI	II	2309.223	2308.518	120	50.	835		NI	II	2337.341	2336.625	30	27.	835	
NI	II	2310.857	2310.147	2		835		NI	II	2337.428	2336.712	100	50.	835	H
NI	II	2311.321	2310.610	1		835		NI	II	2337.985	2337.268	1		835	
NI	II	2311.772	2311.061	6		835		NI	II	2338.950	2338.233	30		835	
NI	II	2312.052	2311.341	5		835		NI	II	2339.957	2339.240	1		835	
NI	II	2312.296	2311.585	75		835		NI	II	2341.919	2341.202	220	50.	835	H
NI	II	2312.765	2312.054	2		835		NI	II	2344.099	2343.381	3		835	
NI	II	2312.951	2312.240	50	27.	835		NI	II	2344.209	2343.491	140	37.	835	
NI	II	2313.627	2312.916	140	58.	835	H	NI	II	2344.665	2343.947	20	58.	835	
NI	II	2313.919	2313.208	3		835		NI	II	2345.985	2345.267	140	58.	835	
NI	II	2314.500	2313.789	2		835		NI	II	2346.160	2345.442	50	11.	835	
NI	II	2315.778	2315.066	2		835		NI	II	2349.895	2349.176	50		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NI	II	2350.050	2349.331	3		835		NI	II	2373.086	2372.361	15		835	
NI	II	2350.299	2349.580	1		835		NI	II	2375.307	2374.582	20		835	
NI	II	2350.641	2349.922	30		835		NI	II	2375.527	2374.802	5		835	
NI	II	2350.710	2349.991	60		835		NI	II	2376.143	2375.418	320	21.	835	
NI	II	2350.866	2350.147	3		835		NI	II	2376.626	2375.901	3		835	
NI	II	2350.988	2350.269	3		835		NI	II	2376.735	2376.010	75		835	
NI	II	2351.565	2350.845	10	19.	835		NI	II	2378.075	2377.350	5	28.	835	
NI	II	2351.923	2351.204	1		835		NI	II	2379.306	2378.580	10		835	
NI	II	2352.768	2352.048	75		835	H	NI	II	2380.300	2379.574	100		835	
NI	II	2352.946	2352.226	1		835		NI	II	2381.079	2380.353	10		835	
NI	II	2353.727	2353.007	10		835		NI	II	2381.449	2380.723	5		835	
NI	II	2354.111	2353.391	2		835		NI	II	2381.825	2381.098	1		835	
NI	II	2354.248	2353.528	1		835		NI	II	2381.936	2381.210	30		835	
NI	II	2355.643	2354.922	5		835		NI	II	2382.242	2381.516	10		835	
NI	II	2355.867	2355.147	10		835		NI	II	2382.619	2381.892	8		835	
NI	II	2356.734	2356.013	75		835		NI	II	2382.720	2381.993	8		835	
NI	II	2357.124	2356.403	100	22.	835	H	NI	II	2383.166	2382.439	40		835	
NI	II	2358.775	2358.054	2		835		NI	II	2383.402	2382.675	8		835	
NI	II	2358.929	2358.208	1		835		NI	II	2384.267	2383.540	5		835	
NI	II	2360.538	2359.816	1		835		NI	II	2385.472	2384.745	100		835	
NI	II	2360.583	2359.862	100		835		NI	II	2386.843	2386.115	15		835	
NI	II	2361.118	2360.396	1		835		NI	II	2387.165	2386.438	5		835	
NI	II	2361.488	2360.766	2		835		NI	II	2388.492	2397.764	100	19.	835	H
NI	II	2362.833	2362.111	5		835		NI	II	2392.534	2391.805	20		835	
NI	II	2363.073	2362.351	1		835		NI	II	2392.835	2392.106	30	36.	835	
NI	II	2363.249	2362.527	1		835		NI	II	2393.018	2392.289	5		835	
NI	II	2364.371	2363.649	1		835		NI	II	2393.317	2392.588	100	36.	835	
NI	II	2365.027	2364.305	50		835		NI	II	2395.249	2394.519	320	20.	835	H
NI	II	2366.106	2365.383	2		835		NI	II	2395.572	2394.843	100	36.	835	H
NI	II	2366.299	2365.576	100		835		NI	II	2396.236	2395.507	1		835	
NI	II	2366.462	2365.739	15		835		NI	II	2398.239	2397.509	1		835	
NI	II	2367.265	2366.542	100	36.	835		NI	II	2399.018	2398.288	75		835	
NI	II	2368.108	2367.385	100	11.	835	H	NI	II	2399.355	2398.625	2	49.	835	
NI	II	2368.391	2367.668	2		835		NI	II	2401.105	2400.374	1		835	
NI	II	2369.659	2368.935	2		835		NI	II	2401.656	2400.925	3		835	
NI	II	2369.942	2369.218	50	36.	835		NI	II	2402.660	2401.929	100		835	
NI	II	2370.236	2369.512	2		835		NI	II	2404.440	2403.708	1		835	
NI	II	2370.587	2369.863	15		835		NI	II	2404.688	2403.956	30		835	
NI	II	2371.489	2370.765	50		835		NI	II	2405.279	2404.548	1		835	
NI	II	2371.762	2371.038	40		835		NI	II	2405.613	2404.881	10		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2405.895	2405.163	100	49.	835		NI	II	2456.394	2455.651	5		835	
NI	II	2407.121	2406.389	15	36.	835		NI	II	2458.467	2457.723	3		835	
NI	II	2407.607	2406.875	50	36.	835		NI	II	2458.609	2457.865	30		835	
NI	II	2408.622	2407.890	40		835		NI	II	2459.924	2459.180	20	61.	835	
NI	II	2408.843	2408.111	3		835		NI	II	2460.783	2460.038	50		835	
NI	II	2409.942	2409.209	2		835		NI	II	2462.508	2461.763	10		835	
NI	II	2410.760	2410.027	5		835		NI	II	2466.238	2465.493	15		835	
NI	II	2411.477	2410.744	10	18.	835		NI	II	2466.686	2465.940	3		835	
NI	II	2412.999	2412.265	10	11.	835		NI	II	2467.216	2466.470	8		835	
NI	II	2413.773	2413.040	50	19.	835		NI	II	2468.126	2467.380	5		835	
NI	II	2415.063	2414.329	10		835		NI	II	2468.393	2467.647	20		835	
NI	II	2415.801	2415.067	5		835		NI	II	2469.457	2468.711	1		835	
NI	II	2416.253	2415.502	15		835		NI	II	2469.594	2468.848	2		835	
NI	II	2416.868	2416.134	440	20.	835	H	NI	II	2470.267	2469.520	3		835	
NI	II	2417.041	2416.306	30		835		NI	II	2470.773	2470.026	1		835	
NI	II	2419.624	2418.889	1		835		NI	II	2471.176	2470.429	2		835	
NI	II	2421.053	2420.317	40		835		NI	II	2471.250	2470.503	1		835	
NI	II	2425.359	2424.623	2		835		NI	II	2473.029	2472.282	10		835	
NI	II	2427.053	2426.316	3		835		NI	II	2473.254	2472.507	15		835	
NI	II	2432.299	2431.561	40	49.	835		NI	II	2473.832	2473.085	50		835	
NI	II	2433.408	2432.670	20		835		NI	II	2473.895	2473.148	100	19.	835	
NI	II	2434.294	2433.556	100	19.	835	H	NI	II	2474.192	2473.444	2		835	
NI	II	2435.058	2434.319	2		835		NI	II	2475.598	2474.850	10		835	
NI	II	2436.230	2435.491	8		835		NI	II	2475.895	2475.147	1		835	
NI	II	2436.697	2435.958	8		835		NI	II	2476.606	2475.858	2		835	
NI	II	2437.052	2436.313	5		835		NI	II	2477.941	2477.193	1		835	
NI	II	2438.631	2437.892	220	19.	835	H	NI	II	2479.246	2478.497	10		835	
NI	II	2439.737	2438.997	2		835		NI	II	2480.721	2479.972	1		835	
NI	II	2442.070	2441.330	10		835		NI	II	2483.003	2482.254	20		835	
NI	II	2447.755	2447.013	10		835		NI	II	2483.429	2482.680	15		835	
NI	II	2447.998	2447.257	3		835		NI	II	2484.954	2484.204	140	61.	835	
NI	II	2448.134	2447.373	30		835		NI	II	2485.131	2484.381	10		835	
NI	II	2448.332	2447.590	5		835		NI	II	2485.276	2484.526	2		835	
NI	II	2448.821	2448.080	1		835		NI	II	2486.710	2485.960	30		835	
NI	II	2449.976	2449.234	5		835		NI	II	2489.832	2489.081	1		835	
NI	II	2450.089	2449.347	15		835		NI	II	2492.447	2491.695	1		835	
NI	II	2451.581	2450.839	100		835		NI	II	2494.418	2493.666	1		835	
NI	II	2452.902	2452.160	8		835		NI	II	2496.653	2495.900	50		835	
NI	II	2453.218	2452.476	2		835		NI	II	2497.560	2496.807	1		835	
NI	II	2456.263	2455.519	30	18.	835		NI	II	2498.374	2497.621	1		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
NI	II	2498.558	2497.805	10	18.	835		NI	II	2543.117	2542.354	15		835	
NI	II	2501.627	2500.873	2		835		NI	II	2546.667	2545.903	140	18.	835	H
NI	II	2501.859	2501.105	1		835		NI	II	2546.755	2545.990	50		835	
NI	II	2502.969	2502.215	5		835		NI	II	2547.952	2547.188	8	57.	835	
NI	II	2504.010	2503.256	100		835		NI	II	2550.313	2549.548	75	48.	835	
NI	II	2504.264	2503.509	5		835		NI	II	2551.800	2551.034	10	17.	835	
NI	II	2504.930	2504.175	1		835		NI	II	2553.383	2552.617	100		835	
NI	II	2505.179	2504.424	5		835		NI	II	2555.754	2554.988	140	62.	835	
NI	II	2506.598	2505.843	120	48.	835		NI	II	2557.032	2556.265	3		835	
NI	II	2506.846	2506.091	100		835		NI	II	2557.123	2556.356	2		835	
NI	II	2511.206	2510.450	8		835		NI	II	2557.405	2556.638	15		835	
NI	II	2511.627	2510.871	220	18.	835	H	NI	II	2558.635	2557.868	15	47.	835	
NI	II	2511.772	2511.016	5		835		NI	II	2559.553	2558.830	0		835	
NI	II	2511.991	2511.235	10		835		NI	II	2559.902	2559.135	8		835	
NI	II	2512.721	2511.965	2		835		NI	II	2560.690	2559.922	5		835	
NI	II	2515.384	2514.627	140	61.	835		NI	II	2560.924	2560.156	120	62.	835	
NI	II	2516.128	2515.371	5		835		NI	II	2563.124	2562.356	5		835	
NI	II	2517.633	2516.875	15		835		NI	II	2565.979	2565.210	15	64.	835	
NI	II	2518.227	2517.469	20		835		NI	II	2566.692	2565.923	220	62.	835	
NI	II	2521.109	2520.351	5	47.	835		NI	II	2566.866	2566.097	5		835	
NI	II	2521.976	2521.217	5		835		NI	II	2567.010	2566.241	5		835	
NI	II	2522.611	2521.853	10		835		NI	II	2567.625	2566.856	1		835	
NI	II	2523.024	2522.266	1		835		NI	II	2567.889	2567.120	3		835	
NI	II	2523.212	2522.453	75		835		NI	II	2568.906	2568.136	3		835	
NI	II	2524.972	2524.213	20		835		NI	II	2569.440	2568.670	3		835	
NI	II	2526.056	2525.296	180	61.	835		NI	II	2569.563	2568.793	1		835	
NI	II	2527.430	2526.670	3		835		NI	II	2572.977	2572.207	2		835	
NI	II	2528.231	2527.471	15		835		NI	II	2573.265	2572.495	3		835	
NI	II	2531.292	2530.532	5		835		NI	II	2575.775	2575.004	10		835	
NI	II	2532.992	2532.231	5		835		NI	II	2577.019	2576.247	2		835	
NI	II	2535.721	2534.959	120		835		NI	II	2579.577	2578.805	1		835	
NI	II	2536.064	2535.302	2		835		NI	II	2581.395	2580.622	5		835	
NI	II	2536.263	2535.501	100		835		NI	II	2583.099	2582.326	0		835	
NI	II	2536.342	2535.580	5		835		NI	II	2583.524	2582.751	10		835	
NI	II	2536.458	2535.696	3		835		NI	II	2584.174	2583.401	20		835	
NI	II	2537.919	2537.157	15		835		NI	II	2584.771	2583.998	140	48.	835	
NI	II	2539.863	2539.100	75	48.	835		NI	II	2585.088	2584.314	50		835	
NI	II	2540.665	2539.902	100		835		NI	II	2586.880	2586.106	1		835	
NI	II	2542.639	2541.876	2		835		NI	II	2587.059	2586.285	2		835	
NI	II	2542.758	2541.994	3		835		NI	II	2587.572	2586.798	10		835	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2588.063	2587.289	8	17.	835	NI	II	2612.745	2611.965	2		835
NI	II	2588.372	2587.598	10		835	NI	II	2613.015	2612.235	8		835
NI	II	2589.085	2588.310	20	46.	835	NI	II	2614.072	2613.291	2		835
NI	II	2590.359	2589.584	18		835	NI	II	2615.414	2614.633	3		835
NI	II	2591.562	2590.787	2		835	NI	II	2615.836	2615.056	220	65.	835
NI	II	2591.968	2591.193	1		835	NI	II	2618.117	2617.336	10		835
NI	II	2592.034	2591.259	15		835	NI	II	2618.324	2617.543	5		835
NI	II	2592.930	2592.155	0		835	NI	II	2618.748	2617.967	2		835
NI	II	2593.165	2592.390	1		835	NI	II	2623.854	2623.071	10		835
NI	II	2593.252	2592.477	15		835	NI	II	2623.936	2623.154	20		835
NI	II	2593.305	2592.530	1		835	NI	II	2625.150	2624.367	10		835
NI	II	2593.370	2592.595	5		835	NI	II	2625.480	2624.697	15		835
NI	II	2594.689	2593.913	3		835	NI	II	2627.209	2626.426	140	62.	835
NI	II	2595.421	2594.645	75		835	NI	II	2627.354	2626.570	5		835
NI	II	2596.749	2595.973	10		835	NI	II	2627.671	2626.888	40		835
NI	II	2597.060	2596.284	2		835	NI	II	2630.571	2629.787	40		835
NI	II	2597.225	2596.448	1		835	NI	II	2631.058	2630.273	30	17.	835
NI	II	2597.345	2596.569	5		835	NI	II	2631.330	2630.545	1		835
NI	II	2597.461	2596.685	5		835	NI	II	2632.134	2631.349	100	63.	835
NI	II	2598.352	2597.575	3		835	NI	II	2632.825	2632.040	5		835
NI	II	2600.713	2599.936	10		835	NI	II	2633.040	2632.255	50		835
NI	II	2600.799	2600.022	10		835	NI	II	2633.498	2632.713	50	63.	835
NI	II	2601.556	2600.779	180		835	NI	II	2633.839	2633.054	3		835
NI	II	2601.806	2601.029	140	62.	835	NI	II	2634.343	2633.558	2		835
NI	II	2602.613	2601.835	2		835	NI	II	2637.610	2636.824	75		835
NI	II	2602.890	2602.113	3		835	NI	II	2639.122	2638.336	2		835
NI	II	2603.152	2602.374	30		835	NI	II	2640.144	2639.358	140		835
NI	II	2603.950	2603.180	8		835	NI	II	2641.757	2640.970	10		835
NI	II	2604.270	2603.492	0		835	NI	II	2641.904	2641.117	40		835
NI	II	2604.398	2603.620	15		835	NI	II	2642.577	2641.790	50		835
NI	II	2605.449	2604.671	10		835	NI	II	2645.514	2644.726	10		835
NI	II	2605.776	2604.998	10		835	NI	II	2647.224	2646.436	3		835
NI	II	2606.110	2605.331	180	32.	835	NI	II	2647.371	2646.583	2		835
NI	II	2606.294	2605.516	3		835	NI	II	2647.683	2646.895	140	63.	835
NI	II	2607.034	2606.255	220	55.	835	NI	II	2649.508	2648.719	10	17.	835
NI	II	2610.065	2609.286	15		835	NI	II	2650.225	2649.436	40		835
NI	II	2610.725	2609.945	220	62.	835	NI	II	2650.499	2649.710	1		835
NI	II	2610.950	2610.170	5		835	NI	II	2651.645	2650.856	10		835
NI	II	2611.258	2610.478	3		835	NI	II	2652.198	2651.408	1		835
NI	II	2612.427	2611.647	75	56.	835	NI	II	2655.182	2654.392	1		835

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2655.250	2654.460	3		835		NI	II	2705.956	2705.154	3		835	
NI	II	2656.135	2655.345	120	66.	835		NI	II	2708.193	2707.390	3		835	
NI	II	2656.560	2655.769	120	63.	835		NI	II	2709.438	2708.635	140	63.	835	
NI	II	2660.289	2659.498	120		835		NI	II	2710.439	2709.636	50		835	
NI	II	2661.797	2661.006	1		835		NI	II	2717.239	2716.434	5		835	
NI	II	2664.012	2663.220	3		835		NI	II	2719.044	2718.239	5		835	
NI	II	2666.045	2665.252	50	45.	835		NI	II	2719.197	2718.392	15		835	
NI	II	2666.645	2665.852	15		835		NI	II	2722.576	2721.770	3		835	
NI	II	2666.743	2665.950	100		835		NI	II	2723.544	2722.738	10		835	
NI	II	2667.216	2666.423	50		835		NI	II	2724.972	2724.165	3		835	
NI	II	2667.409	2666.616	2		835		NI	II	2725.532	2724.725	50		835	
NI	II	2670.005	2669.211	15		835		NI	II	2728.750	2727.943	1		835	
NI	II	2670.15J	2669.365	1		835		NI	II	2729.491	2728.683	3		835	
NI	II	2671.120	2670.326	30	45.	835		NI	II	2730.520	2729.712	3		835	
NI	II	2674.001	2673.207	40		835		NI	II	2732.326	2731.517	3		835	
NI	II	2675.643	2674.848	50		835		NI	II	2732.451	2731.642	5		835	
NI	II	2677.026	2676.231	2		835		NI	II	2733.517	2732.708	3		835	
NI	II	2679.905	2679.109	140	63.	835		NI	II	2738.488	2737.678	3		835	
NI	II	2680.317	2679.521	30		835		NI	II	2739.701	2738.890	20		835	
NI	II	2680.455	2679.659	5		835		NI	II	2740.460	2739.649	2		835	
NI	II	2680.949	2680.153	75		835		NI	II	2740.571	2739.761	3		835	
NI	II	2681.106	2680.310	2		835		NI	II	2743.170	2742.359	3		835	
NI	II	2682.172	2681.376	3		835		NI	II	2743.301	2742.489	3		835	
NI	II	2682.991	2682.194	100		835		NI	II	2743.642	2742.831	180	66.	835	
NI	II	2683.579	2682.782	5		835		NI	II	2748.592	2747.780	15		835	
NI	II	2684.182	2683.385	30		835		NI	II	2748.733	2747.920	2		835	
NI	II	2685.074	2684.277	180	63.	835		NI	II	2751.288	2750.475	5		835	
NI	II	2685.477	2684.680	10		835		NI	II	2754.099	2753.285	10		835	
NI	II	2689.680	2688.881	5		835		NI	II	2755.743	2754.929	2		835	
NI	II	2690.528	2689.730	50		835		NI	II	2756.022	2755.208	75		835	
NI	II	2690.977	2690.178	3		835		NI	II	2758.576	2757.761	20		835	
NI	II	2691.284	2690.485	120	65.	835		NI	II	2759.690	2758.874	120	66.	835	
NI	II	2691.724	2690.925	1		835		NI	II	2761.487	2760.671	15	55.	835	
NI	II	2693.496	2692.697	3		835		NI	II	2762.268	2761.452	2		835	
NI	II	2699.624	2698.823	50		835		NI	II	2762.621	2761.805	1		835	
NI	II	2700.795	2699.994	20		835		NI	II	2763.542	2762.726	1		835	
NI	II	2703.598	2702.796	3		835		NI	II	2764.257	2763.440	5		835	
NI	II	2703.707	2702.905	4		835		NI	II	2765.228	2764.412	8		835	
NI	II	2705.050	2704.248	3		835		NI	II	2769.452	2768.634	120	68.	835	
NI	II	2705.217	2704.415	20		835		NI	II	2772.291	2771.473	10		835	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2772.385	2771.567	8		835	NI	II	2807.062	2806.236	8		835
NI	II	2772.837	2772.018	5		835	NI	II	2807.546	2806.719	5		835
NI	II	2772.908	2772.090	5		835	NI	II	2807.910	2807.083	10		835
NI	II	2773.114	2772.296	3		835	NI	II	2808.215	2807.388	3		835
NI	II	2774.254	2773.435	8		835	NI	II	2808.387	2807.560	1		835
NI	II	2774.675	2773.856	15		835	NI	II	2809.170	2808.343	20	26.	835
NI	II	2775.757	2774.938	8		835	NI	II	2809.871	2809.044	10		835
NI	II	2775.980	2775.160	120	68.	835	NI	II	2811.049	2810.221	10		835
NI	II	2777.168	2776.349	1		835	NI	II	2811.920	2811.092	10		835
NI	II	2777.626	2776.806	40		835	NI	II	2812.035	2811.207	3		835
NI	II	2780.108	2779.288	8		835	NI	II	2812.159	2811.331	2		835
NI	II	2780.180	2779.360	3		835	NI	II	2812.788	2811.960	10		835
NI	II	2780.411	2779.591	5		835	NI	II	2813.34J	2812.521	20		835
NI	II	2781.302	2780.482	30		835	NI	II	2813.410	2812.582	5		835
NI	II	2781.372	2780.551	10		835	NI	II	2815.298	2814.469	8		835
NI	II	2781.726	2780.905	10		835	NI	II	2816.170	2815.341	8		835
NI	II	2783.079	2782.258	5		835	NI	II	2816.809	2815.980	5		835
NI	II	2783.768	2782.947	1		835	NI	II	2817.086	2816.256	1		835
NI	II	2786.683	2785.861	2		835	NI	II	2818.237	2817.407	2		835
NI	II	2791.380	2790.557	15		835	NI	II	2818.551	2817.722	8		835
NI	II	2792.957	2792.133	50		835	NI	II	2820.712	2819.882	5		835
NI	II	2793.696	2792.872	50		835	NI	II	2821.303	2820.472	40		835
NI	II	2794.168	2793.344	40		835	NI	II	2822.575	2821.745	120		835
NI	II	2794.421	2793.597	20		835	NI	II	2823.710	2822.879	2		835
NI	II	2795.445	2794.621	00		835	NI	II	2824.708	2823.877	2		835
NI	II	2795.963	2795.139	3		835	NI	II	2825.045	2824.214	8		835
NI	II	2800.076	2799.251	3		835	NI	II	2825.973	2825.142	3		835
NI	II	2800.215	2799.390	20		835	NI	II	2826.063	2825.231	15	25.	835
NI	II	2800.384	2799.559	5		835	NI	II	2826.248	2825.416	1		835
NI	II	2801.055	2800.230	15		835	NI	II	2826.309	2825.477	1		835
NI	II	2801.526	2800.701	40		835	NI	II	2826.472	2825.641	50		835
NI	II	2801.632	2800.807	40		835	NI	II	2826.874	2826.043	3		835
NI	II	2801.776	2800.950	1		835	NI	II	2827.102	2826.270	20		835
NI	II	2802.025	2801.199	15		835	NI	II	2827.525	2826.693	1		835
NI	II	2802.537	2801.711	1		835	NI	II	2827.958	2827.126	10		835
NI	II	2802.601	2801.775	15		835	NI	II	2828.339	2827.507	5		835
NI	II	2803.336	2802.510	10		835	NI	II	2830.284	2829.452	3		835
NI	II	2804.742	2803.916	3		835	NI	II	2830.377	2829.545	1		835
NI	II	2805.594	2804.768	3		835	NI	II	2831.328	2830.496	2		835
NI	II	2806.494	2805.668	60	54.	835	NI	II	2831.508	2830.675	4		835

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2831.886	2831.054	5		835		NI	II	2844.025	2843.189	5		835	
NI	II	2832.187	2831.354	15		835		NI	II	2844.356	2843.520	75		835	
NI	II	2832.455	2831.622	30		835		NI	II	2844.567	2843.731	5		835	
NI	II	2832.694	2831.861	3		835		NI	II	2844.663	2843.827	30		835	
NI	II	2832.771	2831.937	5		835		NI	II	2844.740	2843.904	20		835	
NI	II	2832.883	2832.050	10		835		NI	II	2844.868	2844.032	75		835	
NI	II	2833.043	2832.209	50		835		NI	II	2845.042	2844.206	30		835	
NI	II	2833.100	2832.267	140		835		NI	II	2845.613	2844.777	20		835	
NI	II	2833.277	2832.444	2		835		NI	II	2845.859	2845.023	10		835	
NI	II	2833.625	2832.791	15		835		NI	II	2846.213	2845.377	75		835	
NI	II	2834.155	2833.321	8		835		NI	II	2846.334	2845.498	5		835	
NI	II	2834.436	2833.602	2		835		NI	II	2846.438	2845.601	15		835	
NI	II	2834.532	2833.699	1		835		NI	II	2846.652	2845.815	10		835	
NI	II	2834.944	2834.110	100		835		NI	II	2846.828	2845.991	5		835	
NI	II	2835.006	2834.172	5		835		NI	II	2847.399	2846.562	50		835	
NI	II	2835.188	2834.354	5		835		NI	II	2847.640	2846.803	50		835	
NI	II	2835.358	2834.525	100		835		NI	II	2848.418	2847.581	20		835	
NI	II	2835.894	2835.060	100		835		NI	II	2848.543	2847.706	40		835	
NI	II	2836.537	2835.703	10		835		NI	II	2849.166	2848.329	2		835	
NI	II	2836.650	2835.816	10		835		NI	II	2849.758	2848.921	3		835	
NI	II	2837.029	2836.195	2		835		NI	II	2850.389	2849.552	10		835	
NI	II	2837.259	2836.425	75		835		NI	II	2853.271	2852.433	50		835	
NI	II	2837.446	2836.612	1		835		NI	II	2853.871	2853.032	10		835	
NI	II	2837.593	2836.758	2		835		NI	II	2854.245	2853.407	50		835	
NI	II	2837.691	2836.857	15		835		NI	II	2854.277	2853.439	25		835	
NI	II	2838.250	2837.415	20		835		NI	II	2854.729	2853.890	5		835	
NI	II	2838.467	2837.632	3		835		NI	II	2855.038	2854.200	75		835	
NI	II	2838.515	2837.680	3		835		NI	II	2855.098	2854.259	30		835	
NI	II	2838.604	2837.769	30		835		NI	II	2855.413	2854.575	3		835	
NI	II	2840.188	2839.353	20		835		NI	II	2856.320	2855.481	8		835	
NI	II	2841.004	2840.168	2		835		NI	II	2856.396	2855.557	30		835	
NI	II	2841.307	2840.472	20		835		NI	II	2857.099	2856.260	5		835	
NI	II	2841.766	2840.930	20		835		NI	II	2857.237	2856.398	8		835	
NI	II	2842.331	2841.496	5		835		NI	II	2858.247	2857.408	100		835	
NI	II	2842.447	2841.611	8		835		NI	II	2858.709	2857.870	1		835	
NI	II	2842.838	2842.002	40		835		NI	II	2859.679	2858.839	15		835	
NI	II	2843.252	2842.417	50	54.	835		NI	II	2859.941	2859.101	3		835	
NI	II	2843.537	2842.701	2		835		NI	II	2860.332	2859.492	20		835	
NI	II	2843.742	2842.906	10		835		NI	II	2860.868	2860.028	5		835	
NI	II	2843.765	2842.929	30		835		NI	II	2860.966	2860.126	30		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NI	II	2861.572	2860.732	100		835		NI	II	2899.083	2898.234	1		835	
NI	II	2862.225	2861.385	2		835		NI	II	2901.712	2900.862	50		835	
NI	II	2863.564	2862.723	20		835		NI	II	2906.815	2905.963	2		835	
NI	II	2864.055	2863.214	3		835		NI	II	2908.395	2907.543	8		835	
NI	II	2864.322	2863.482	30		835		NI	II	2908.494	2907.642	8		835	
NI	II	2864.540	2863.699	100	26.	835		NI	II	2909.000	2908.148	3		835	
NI	II	2864.865	2864.024	220	67.	835		NI	II	2909.080	2908.228	1		835	
NI	II	2865.591	2864.750	10		835		NI	II	2909.295	2908.443	3		835	
NI	II	2865.795	2864.954	5		835		NI	II	2909.451	2908.599	3		835	
NI	II	2867.368	2866.526	3		835		NI	II	2909.979	2909.127	3		835	
NI	II	2867.689	2866.848	5		835		NI	II	2910.180	2909.328	5		835	
NI	II	2867.979	2867.137	3		835		NI	II	2914.443	2913.590	100	26.	835	
NI	II	2868.615	2867.774	4		835		NI	II	2915.549	2914.695	15.		835	
NI	II	2869.978	2869.136	75		835		NI	II	2916.333	2915.479	3		835	
NI	II	2870.365	2869.522	140		835		NI	II	2916.499	2915.646	8		835	
NI	II	2870.944	2870.101	10		835		NI	II	2918.415	2917.561	8		835	
NI	II	2871.190	2870.348	10		835		NI	II	2919.788	2918.934	3		835	
NI	II	2871.800	2870.957	5		835		NI	II	2919.907	2919.052	75		835	
NI	II	2871.945	2871.102	5		835		NI	II	2920.822	2919.967	10		835	
NI	II	2872.741	2871.898	8		835		NI	II	2927.657	2926.800	2		835	
NI	II	2872.996	2872.153	20		835		NI	II	2932.480	2931.622	10		835	
NI	II	2873.051	2872.208	100		835		NI	II	2935.375	2934.516	100		835	
NI	II	2873.405	2872.562	3		835		NI	II	2935.950	2935.092	5		835	
NI	II	2878.889	2878.045	20		835		NI	II	2936.007	2935.149	5		835	
NI	II	2880.227	2879.382	10		835		NI	II	2936.491	2935.632	20		835	
NI	II	2881.626	2880.781	1		835		NI	II	2936.541	2935.682	20		835	
NI	II	2882.033	2881.188	5		835		NI	II	2943.648	2942.788	2		835	
NI	II	2882.100	2881.255	2	25.	835		NI	II	2948.316	2947.454	40	35.	835	
NI	II	2882.388	2881.543	15		835		NI	II	2949.377	2948.515	5		835	
NI	II	2883.162	2882.317	50		835		NI	II	2949.826	2948.964	4		835	
NI	II	2883.678	2882.832	2		835		NI	II	2951.578	2950.716	15		835	
NI	II	2883.841	2882.996	2		835		NI	II	2953.046	2952.183	2		835	
NI	II	2884.657	2883.811	8		835		NI	II	2955.726	2954.863	75		835	
NI	II	2884.832	2883.986	1		835		NI	II	2957.724	2956.860	5		835	
NI	II	2886.100	2885.253	8		835		NI	II	2960.502	2959.638	2		835	
NI	II	2890.550	2889.703	3		835		NI	II	2965.468	2964.602	10		835	
NI	II	2892.078	2891.231	3		835		NI	II	2967.234	2966.368	2		835	
NI	II	2897.453	2896.604	3		835		NI	II	2969.670	2968.804	2		835	
NI	II	2897.490	2896.641	1		835		NI	II	2969.759	2968.892	25		835	
NI	II	2898.899	2898.050	5		835		NI	II	2970.215	2969.348	120		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	II	2970.713	2969.846	30		835		NI	II	3025.935	3025.054	2		835	
NI	II	2971.518	2970.651	1		835		NI	II	3026.516	3025.635	30		835	
NI	II	2972.342	2971.475	3		835		NI	II	3028.148	3027.267	1		835	
NI	II	2973.325	2972.457	10		835		NI	II	3028.265	3027.383	50		835	
NI	II	2973.872	2973.004	15		835		NI	II	3029.912	3029.030	2		835	
NI	II	2975.524	2974.655	3		835		NI	II	3031.272	3030.390	2		835	
NI	II	2975.597	2974.729	20		835		NI	II	3032.618	3031.735	20		835	
NI	II	2976.578	2975.710	10		835		NI	II	3033.341	3032.458	5	3.	835	
NI	II	2977.260	2976.391	40		835		NI	II	3036.001	3035.117	20		835	
NI	II	2979.565	2978.695	2		835		NI	II	3040.405	3039.521	10		835	
NI	II	2981.912	2981.042	25		835		NI	II	3040.905	3040.020	5		835	
NI	II	2983.161	2982.291	10		835		NI	II	3042.146	3041.261	5		835	
NI	II	2983.813	2982.943	20		835		NI	II	3042.504	3041.619	5		835	
NI	II	2984.067	2983.197	10		835		NI	II	3042.934	3042.049	2		835	
NI	II	2984.414	2983.544	10		835		NI	II	3043.800	3042.915	3		835	
NI	II	2986.482	2985.611	10		835		NI	II	3047.895	3047.009	2		835	
NI	II	2987.006	2986.135	1		835		NI	II	3055.710	3054.822	10		835	
NI	II	2988.947	2988.075	60		835		NI	II	3057.874	3056.985	8		835	
NI	II	2989.038	2988.166	2		835		NI	II	3064.833	3063.942	5	3.	835	
NI	II	2991.836	2990.964	2		835		NI	II	3067.128	3066.237	8		835	
NI	II	2991.944	2991.071	20		835		NI	II	3068.449	3067.558	15		835	
NI	II	2993.215	2992.343	1		835		NI	II	3076.9	3076.0			909	F
NI	II	2996.881	2996.009	5		835		NI	II	3079.825	3078.930	15		835	
NI	II	2998.928	2998.054	5		835		NI	II	3085.474	3084.578	4		835	
NI	II	3000.852	2999.977	2		835		NI	II	3087.966	3087.069	75	35.	835	
NI	II	3001.212	3000.337	2		835		NI	II	3088.800	3087.904	4		835	
NI	II	3005.410	3004.534	3		835		NI	II	3110.098	3109.196	8		835	
NI	II	3005.958	3005.082	3		835		NI	II	3118.916	3118.012	2		835	
NI	II	3010.310	3009.433	3		835		NI	II	3128.183	3127.276	5		835	
NI	II	3014.445	3013.567	5		835		NI	II	3138.272	3137.363	2		835	
NI	II	3014.592	3013.713	5		835		NI	II	3139.148	3138.238	8		835	
NI	II	3016.116	3015.238	5		835		NI	II	3139.788	3138.877	8		835	
NI	II	3016.826	3015.947	20		835		NI	II	3144.859	3143.948	8		835	
NI	II	3017.875	3016.996	20		835		NI	II	3149.118	3148.207	4		835	
NI	II	3018.410	3017.531	10		835		NI	II	3149.782	3148.870	10		835	
NI	II	3020.459	3019.580	20		835		NI	II	3150.437	3149.525	5		835	
NI	II	3021.782	3020.902	10		835		NI	II	3150.613	3149.700	10		835	
NI	II	3021.895	3021.015	20		835		NI	II	3168.001	3167.084	20		835	
NI	II	3022.295	3021.415	3		835		NI	II	3180.540	3179.620	20		835	
NI	II	3023.287	3022.407	10		835		NI	II	3190.552	3189.630	30		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
NI	II	3193.505	3192.582	4		835		NI	II	3266.408	3265.466	30		835	
NI	II	3194.600	3193.677	2		835		NI	II	3266.671	3265.730	100		835	
NI	II	3195.107	3194.183	10		835		NI	II	3266.838	3265.896	30		835	
NI	II	3196.100	3195.177	8		835		NI	II	3267.488	3266.546	10		835	
NI	II	3196.218	3195.294	5		835		NI	II	3268.271	3267.329	40		835	
NI	II	3203.237	3202.312	10		835		NI	II	3268.904	3267.962	3		835	
NI	II	3209.83	3208.91	1	2.	1015		NI	II	3269.596	3268.654	5		835	
NI	II	3211.990	3211.062	5		835		NI	II	3270.374	3269.432	15		835	
NI	II	3214.100	3213.172	3		835		NI	II	3270.867	3269.925	20		835	
NI	II	3214.699	3213.771	8		835		NI	II	3271.260	3270.317	140		835	
NI	II	3215.427	3214.498	10		835		NI	II	3272.142	3271.199	5		835	
NI	II	3216.227	3215.299	4		835		NI	II	3272.985	3272.042	20		835	
NI	II	3223.266	3222.336	10		835		NI	II	3273.166	3272.223	5		835	
NI	II	3224.0	3223.1			909	F	NI	II	3274.332	3273.389	2		835	
NI	II	3230.567	3229.634	40		835		NI	II	3274.463	3273.519	4		835	
NI	II	3231.169	3230.237	2		835		NI	II	3275.091	3274.148	15		835	
NI	II	3235.213	3234.279	20		835		NI	II	3275.253	3274.310	10		835	
NI	II	3237.677	3236.743	120		835		NI	II	3275.460	3274.517	100		835	
NI	II	3238.866	3237.932	5		835		NI	II	3275.861	3274.917	100		835	
NI	II	3238.951	3238.017	100		835		NI	II	3276.927	3275.982	120		835	
NI	II	3244.830	3243.894	10		835		NI	II	3277.276	3276.331	2		835	
NI	II	3248.048	3247.111	5		835		NI	II	3277.691	3276.747	2		835	
NI	II	3249.640	3248.703	10		835		NI	II	3278.655	3277.711	75		835	
NI	II	3250.684	3249.746	15		835		NI	II	3280.086	3279.141	50		835	
NI	II	3250.773	3249.836	20		835		NI	II	3280.106	3279.161	25		835	
NI	II	3252.187	3251.249	20		835		NI	II	3280.501	3279.556	2		835	
NI	II	3252.904	3251.966	30		835		NI	II	3281.030	3280.085	2		835	
NI	II	3253.577	3252.639	5		835		NI	II	3281.352	3280.407	50		835	
NI	II	3260.718	3259.778	5		835		NI	II	3281.414	3280.469	3		835	
NI	II	3260.887	3259.947	30		835		NI	II	3281.606	3280.661	30		835	
NI	II	3261.186	3260.246	10		835		NI	II	3282.214	3281.269	20		835	
NI	II	3262.027	3261.086	2		835		NI	II	3282.537	3281.592	2		835	
NI	II	3262.694	3261.753	40		835		NI	II	3282.770	3281.824	10		835	
NI	II	3263.422	3262.481	1		835		NI	II	3282.883	3281.938	100		835	
NI	II	3263.555	3262.615	15		835		NI	II	3282.990	3282.044	20		835	
NI	II	3264.250	3263.309	10		835		NI	II	3283.182	3282.236	10		835	
NI	II	3265.305	3264.364	100		835		NI	II	3284.059	3283.113	75		835	
NI	II	3265.921	3264.980	20		835		NI	II	3284.483	3283.537	30		835	
NI	II	3266.115	3265.173	8		835		NI	II	3285.607	3284.660	180		835	
NI	II	3266.248	3265.306	20		835		NI	II	3286.227	3285.281	20		835	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
NI	III	2525.119	2524.358	15	32.	661		NI	V	2491.5	2490.7			922	F P
NI	III	2544.277	2543.513	30	22.	661		NI	V	2510.7	2509.9			922	F P
NI	III	2578.509	2577.742	25		661		NI	V	2515.4	2514.6			922	F P
NI	III	2689.473	2688.676	5		661		NI	V	2522.5	2521.7			922	F P
NI	III	2729.541	2728.732	30		661		NI	V	2905.6	2904.7			922	F P
NI	III	2734.258	2733.466	50		661		NI	V	2935.9	2935.0			922	F P
NI	III	2740.21	2739.40	1		661		NI	V	2982.7	2981.8			922	F P
NI	III	2745.812	2745.001	20		661		NI	V	3006.9	3006.0			922	F P
NI	III	2747.97	2747.16	1		661		NI	V	3014.6	3013.7			922	F P
NI	III	2751.887	2751.066	2		661		NI	V	3037.0	3036.1			922	F P
NI	III	2764.19	2763.37	1		661		NI	V	3381.7	3380.7			922	F P
NI	III	2774.51	2773.69	2		661		NI	V	3433.7	3432.7			922	F P
NI	III	2777.932	2777.118	5		661		NI	V	3447.2	3446.2			922	F P
NI	III	2779.34	2778.52	0		661		NI	V	3486.6	3485.6			922	F P
NI	III	2797.774	2796.953	3		661		NI	XI	3022.2	3021.3			806	H
NI	III	2803.626	2802.798	5		661		NI	XIII	2126.17	2125.50	34		940	FH
NI	III	2805.47	2804.65	2		661		NI	XIV	2184.88	2184.20	31		940	FH
NI	III	2820.540	2819.715	20		661		NI	XIV	2319.5	2318.8			726	F
NI	III	2830.44	2829.61	2		661		NI	XIV	2541.3	2540.5			726	F
NI	III	2831.506	2830.672	8		661		NI	XV	2086.27	2085.61			940	FH
NI	III	2850.07	2849.23	2		661		NI	XV	2819.3	2818.5			726	F
NI	III	2851.77	2850.97	2		661		O	I	2325.450	2324.738		205.	523	P
NI	III	2853.02	2852.18	8		661		O	I	2877.139	2876.294	100	30.0	210	
NI	III	2857.18	2856.34	5		661		O	I	2879.776	2878.931		30.0	210	
NI	III	2875.232	2874.391	8		661		O	I	2879.822	2878.977	200	30.0	210	
NI	III	2900.173	2899.327	10		661		O	I	2879.835	2878.990		30.0	210	
NI	III	2904.925	2904.072	2		661		O	I	2884.655	2883.809	100	30.0	210	
NI	III	2937.79	2936.93	1		661		O	I	2884.702	2883.855	200	30.0	210	
NI	III	2939.49	2938.63	1		661		O	I	2959.228	2958.365		2.	523	F P
NI	III	2941.324	2940.468	3		661		O	I	2973.154	2972.286		2.	1005	F
NI	III	2958.913	2958.050	5		661		O	I	3349.140	3348.177	285	3.0	1009	
NI	III	2977.467	2976.598	10		661		O	I	3349.196	3348.233	220	3.0	1009	
NI	V	2385.5	2384.8			922	F P	O	I	3349.237	3348.273	160	3.0	1009	
NI	V	2437.2	2436.5			922	F P								
NI	V	2454.7	2454.0			922	F P								
NI	V	2473.4	2472.7			922	F P								
NI	V	2486.8	2486.1			922	F P								

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	II	2017.25	2016.60	200		36		0	II	2445.00	2444.26	60	18.	488	
0	II	2021.04	2020.39	200		36	P	0	II	2446.29	2445.55	250	18.	488	
0	II	2022.18	2021.53	100		36	P	0	II	2471.04	2470.30			108	F
0	II	2023.61	2022.96	4		168	P	0	II	2518.73	2517.97	40	21.	488	
0	II	2074.83	2074.17	4		168		0	II	2531.12	2530.36	60	21.	488	P
0	II	2100.68	2100.01	4		168	P	0	II	2572.246	2571.476	40	22.	488	
0	II	2101.36	2100.69	4		168		0	II	2576.071	2575.300	90	22.	488	
0	II	2148.91	2148.23	1		168	M	0	II	2734.15	2733.34	250	20.	488	
0	II	2150.40	2149.73	1		168	P	0	II	2748.27	2747.46	90	20.	488	
0	II	2183.32	2182.64	400		36	P	0	II	2783.88	2783.06	10		168	P
0	II	2189.88	2189.20	10		168		0	II	2804.03	2803.20	4		168	P
0	II	2191.25	2190.57	200		36	P	0	II	2809.61	2808.78	10		168	P
0	II	2192.34	2191.66	10		168	P	0	II	2837.14	2836.31	10		168	P
0	II	2196.27	2195.59	200		36	P	0	II	2886.74	2885.90	4		168	M
0	II	2230.35	2229.66	1		168		0	II	2887.51	2886.66			375	P
0	II	2233.59	2232.89	1		168	P	0	II	2888.76	2887.91	25		168	M
0	II	2284.18	2283.48	25		168	P	0	II	2889.26	2888.42			375	P
0	II	2285.59	2284.89	25		168		0	II	2893.27	2892.42	4		168	P
0	II	2294.03	2293.32	90	19.	488		0	II	2893.77	2892.92	10		168	P
0	II	2301.06	2300.35	150	19.	488		0	II	2898.38	2897.53	4		168	
0	II	2308.47	2307.76	4		168	P	0	II	2901.16	2900.31	1		168	
0	II	2313.76	2313.05	25		168		0	II	2905.14	2904.29	10		168	M
0	II	2316.83	2316.12	25		168	Q	0	II	2905.85	2905.00	10		168	
0	II	2317.50	2316.79	25		168		0	II	2907.42	2906.57	25		168	P
0	II	2320.39	2319.68	40		168		0	II	2909.60	2908.75	4		168	P
0	II	2322.86	2322.15	25		168		0	II	2911.98	2911.13	10		168	P
0	II	2325.53	2324.82	4		168		0	II	2912.65	2911.80	10		168	P
0	II	2326.72	2326.01	10		168	P	0	II	2916.39	2915.54	4		168	P
0	II	2328.68	2327.97	10		168		0	II	2943.86	2943.00	10		168	M
0	II	2331.98	2331.27	1		168	P	0	II	2996.81	2995.94	4		168	M
0	II	2340.10	2339.38	25		168	P	0	II	2998.61	2997.74	10		168	M
0	II	2399.61	2398.88	1		168		0	II	3003.80	3002.93	4		168	M
0	II	2399.94	2399.21	1		168		0	II	3006.49	3005.62	10		168	M
0	II	2412.33	2411.60	90		168		0	II	3006.94	3006.07	10		168	P
0	II	2426.36	2425.62	60		168	P	0	II	3007.69	3006.82	25		168	M
0	II	2432.40	2431.66	1		168		0	II	3007.95	3007.08	25	74.	168	
0	II	2434.30	2433.56	200	18.	488		0	II	3008.65	3007.78	25	74.	168	P
0	II	2436.80	2436.06	60		168		0	II	3009.23	3008.35	4	74.	168	P
0	II	2438.83	2438.09	4		168		0	II	3009.71	3008.83	25		168	
0	II	2442.41	2441.67	10		168		0	II	3010.57	3009.69	4	74.	168	P

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	II	3010.72	3009.84	4	74.	168		0	II	3375.44	3374.47	0	96.	1015	P
0	II	3013.70	3012.82	4	74.	168		0	II	3376.74	3375.77	1	52.	1015	
0	II	3014.21	3013.33	40	56.	168	P	0	II	3378.17	3377.20	120	9.	1015	
0	II	3015.25	3014.38	4		168	P	0	II	3391.22	3390.25	150	9.	1015	
0	II	3016.84	3015.96	4	72.	168	P	0	II	3408.35	3407.38	120	44.	1015	
0	II	3026.66	3025.78	4	84.	168		0	II	3410.82	3409.84	90	44.	1015	
0	II	3029.64	3028.76	4	73.	168		0	II	3420.89	3419.91	4		168	M
0	II	3032.97	3032.09	25	83.	168		0	II	3421.61	3420.63	10		168	M
0	II	3033.35	3032.47	10	83.	168		0	II	3448.97	3447.98	60	27.	1015	
0	II	3040.33	3039.45	4	72.	168		0	II	3454.23	3453.24	1	71.	1015	P
0	II	3040.89	3040.01	4	72.	1015	P	0	II	3458.98	3457.99	4	81.	1015	
0	II	3048.62	3047.74	1	82.	168	P	0	II	3460.06	3459.07	1	81.	1015	
0	II	3082.35	3081.46	10		1015	M	0	II	3471.41	3470.42	60		1015	
0	II	3098.42	3097.52	1		168		0	II	3471.80	3470.81	150	27.	1015	
0	II	3114.61	3113.71	4	14.	1015		0	II	3475.93	3474.94	4	8.	1015	
0	II	3123.53	3122.62	90	14.	1015		0	II	3489.14	3488.14	1	7.	1015	P
0	II	3124.92	3124.02	10	14.	1015		0	II	3495.66	3494.66	0	70.	1015	
0	II	3130.34	3129.44	120	14.	1015		0	II	3496.44	3495.44	1	70.	1015	
0	II	3135.23	3134.32	25	14.	1015		0	II	3497.27	3496.27	4	7.	1015	
0	II	3135.73	3134.82	250	14.	1015		0	II	3501.64	3500.64	0	80.	1015	P
0	II	3139.35	3138.44	150	14.	1015		0	II	3502.63	3501.63	0	70.	1015	P
0	II	3140.68	3139.77	40	14.	1015		0	II	3507.03	3506.02	1	70.	1015	P
0	II	3166.0	3165.1	4		168		0	III	2013.92	2013.27	360		72	
0	II	3170.1	3169.2	4		168		0	III	2024.61	2023.96	160		72	
0	II	3217.01	3216.08	1	107.	1015		0	III	2046.32	2045.67	220		72	
0	II	3217.69	3216.76	4	107.	1015		0	III	2053.40	2052.74	160		72	
0	II	3218.97	3218.04	10	107.	1015	P	0	III	2153.39	2152.71	4		168	
0	II	3271.86	3270.92	120	39.	1015	P	0	III	2166.08	2165.40	25		168	P
0	II	3274.46	3273.52	120	39.	1015		0	III	2182.34	2181.66	4		168	
0	II	3278.63	3277.69	120	23.	1015		0	III	2187.75	2187.07	4		168	P
0	II	3288.54	3287.59	200	23.	1015		0	III	2228.84	2228.15	25		168	
0	II	3291.08	3290.13	60	23.	1015		0	III	2253.569	2252.873	1		1032	
0	II	3296.08	3295.13	40	23.	1015		0	III						
0	II	3302.51	3301.56	25	23.	1015		0	III	2285.82	2285.12	0		175	P
0	II	3306.10	3305.15	90	23.	1015		0	III	2286.36	2285.66	10		168	
0	II	3307.55	3306.60	90	23.	1015		0	III	2287.05	2286.35	1		175	P
0	II	3361.11	3360.15	0	52.	1015		0	III	2287.98	2287.28	4		168	P
0	II	3367.92	3366.95	0	52.	1015	P	0	III	2288.82	2288.12	0		175	
0	II	3371.20	3370.23	0	52.	1015									
0	II	3372.71	3371.74	10	52.	1015	P								

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	III	2289.06	2288.36	0	175		0	III	2427.09	2426.35	1	168	
0	III	2296.259	2295.552	0	1032		0	III	2427.68	2426.94	10	168	
0	III	2306.752	2306.044	0	1032		0	III	2430.09	2429.35	4	175	
0	III	2309.41	2308.70	4	168		0	III	2430.33	2429.59	1	175	P
0	III	2312.299	2311.589	10	1032		0	III	2435.698	2434.959	10	1032	
0	III	2315.508	2314.797	10	1032		0	III	2439.64	2438.90	60	168	P
0	III	2316.259	2315.548	40	1032		0	III	2441.80	2441.06	10	168	
0	III	2318.139	2317.427	25	1032		0	III	2442.177	2441.439	0	1032	
0	III	2320.289	2319.577	10	1032		0	III	2442.478	2441.740	10	1032	
0	III	2321.66	2320.95		108	F	0	III	2447.66	2446.92	0	168	
0	III	2332.10	2331.39		108	F	0	III	2448.995	2448.255	4	1032	
0	III	2345.763	2345.045	1	1032		0	III	2451.83	2451.09	1	168	
0	III	2372.925	2372.201	25	1032		0	III	2452.662	2451.921	10	1032	
0	III	2373.546	2372.822	10	1032		0	III	2454.345	2453.603	10	1032	
0	III	2379.590	2378.867	40	1032		0	III	2454.95	2454.21	F	175	
0	III	2382.992	2382.267	20	1032		0	III	2455.73	2454.99	150	19.	168
0	III	2384.638	2383.913	90	1032		0	III	2458.513	2457.770	0	1032	
0	III	2388.93	2388.20	4	168		0	III	2458.81	2458.07	0	1032	
0	III	2391.17	2390.44	50	168		0	III	2475.365	2474.619	1	1032	
0	III	2395.06	2394.33	60	168		0	III	2476.48	2475.73	0	168	
0	III	2399.746	2399.016	0	1032		0	III	2481.48	2480.73	4	168	
0	III	2402.282	2401.552	1	1032		0	III	2483.35	2482.60	1	168	
0	III	2421.9	2421.2	0	168		0	III	2483.99	2483.24	1	168	
0	III	2423.57	2422.84	60	168		0	III	2486.02	2485.27	0	168	M
0	III	2426.67	2425.93	10	168		0	III	2489.0	2488.3	0	168	
							0	III	2489.8	2489.0	F	175	M
							0	III	2492.91	2492.16	F	175	P
							0	III	2505.45	2504.70	0	1032	
							0	III	2513.192	2512.437	1	1032	
							0	III	2516.987	2516.231	0	1032	
							0	III	2530.167	2529.407	4	1032	
							0	III	2532.54	2531.78	0	1032	
							0	III	2533.25	2532.49	0	1032	
							0	III	2534.854	2534.092	90	1032	
							0	III	2540.263	2539.502	10	1032	
							0	III	2540.84	2540.08	0	1032	
							0	III	2542.586	2541.825	0	1032	
							0	III	2543.489	2542.727	60	1032	
							0	III	2547.187	2546.424	40	1032	
							0	III	2548.225	2547.462	10	1032	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	III	2550.430	2549.667	10	1032		0	III	2693.530	2692.731	4	1032	
0	III	2556.431	2555.665	1	1032		0	III	2696.29	2695.49	90	23.	168
0	III	2558.83	2558.06	150	168	21.	0	III	2696.872	2696.072	25	1032	
0	III	2567.325	2566.556	0	1032		0	III	2701.826	2701.025	25	1032	
0	III	2569.88	2569.11	4	168		0	III	2709.727	2708.926	4	1032	
0	III	2570.36	2569.59	1	1032		0	III	2711.200	2710.398	1	1032	
0	III	2573.27	2572.50	1	1032		0	III	2714.216	2713.414	10	1032	
0	III	2576.917	2576.148	4	1032		0	III	2727.76	2726.95	4	168	
0	III	2577.980	2577.211	1	1032		0	III	2735.95	2735.14	4	168	
0	III	2578.94	2578.18	0	168	P	0	III	2739.96	2739.15	1	168	
0	III	2581.507	2580.737	0	1032		0	III	2753.28	2752.47	1	168	
0	III	2583.911	2583.139	4	1032		0	III	2757.03	2756.22	4	168	
0	III	2589.00	2588.23	1	168		0	III	2772.92	2772.10	10	168	P
0	III	2594.504	2593.730	1	1032		0	III	2795.012	2794.189	10	1032	
0	III	2597.68	2596.89	0	168	P	0	III	2798.85	2798.03	4	168	P
0	III	2598.47	2597.69	150	488	20.	0	III	2799.860	2799.035	4	1032	
0	III	2606.19	2605.41	90	488	20.	0	III	2810.565	2809.739	25	1032	
0	III	2610.415	2609.636	40	1032		0	III	2819.599	2818.771	4	1032	
0	III	2616.98	2616.20	0	1032		0	III	2853.63	2852.79	4	168	P
0	III	2617.799	2617.020	4	1032		0	III	2862.38	2861.54	25	168	P
0	III	2619.647	2618.868	0	1032		0	III	2879.44	2878.59	1	168	P
0	III	2620.888	2620.108	1	1032		0	III	2899.58	2898.74	4	168	P
0	III	2623.05	2622.27	10	168	P	0	III	2960.54	2959.68	60	168	
0	III	2623.78	2623.00	4	1032		0	III	2984.53	2983.66	4	1015	
0	III	2625.496	2624.715	1	1032		0	III	2984.65	2983.78	200	18.	168
0	III	2626.46	2625.68	1	1032		0	III	2992.94	2992.07	10	10.	1015
0	III	2629.09	2628.31	4	1032		0	III	2997.38	2996.51	25	10.	1015
0	III	2662.402	2661.612	1	1032		0	III	2998.58	2997.71	10	10.	1015
0	III	2666.54	2665.78	120	488	22.	0	III	3005.22	3004.35	40	10.	1015
0	III	2670.794	2670.002	10	1032	P	0	III	3009.67	3008.79	25	10.	1015
0	III	2675.42	2674.63	150	488	22.	0	III	3018.51	3017.63	60	10.	1015
0	III	2677.878	2677.084	4	1032	P	0	III	3024.33	3023.45	60	4.	1015
0	III	2678.595	2677.800	25	1032		0	III	3025.24	3024.36	4	10.	1015
0	III	2682.181	2681.386	10	1032		0	III	3025.45	3024.57	40	4.	1015
0	III	2684.45	2683.65	40	168	23.	0	III	3035.20	3034.32	1	20.	1015
0	III	2685.713	2684.917	4	1032		0	III	3036.31	3035.43	40	4.	1015
0	III	2687.00	2686.20	250	488	P	0	III	3043.91	3043.02	60	4.	1015
0	III	2688.33	2687.53	60	168	23.	0	III	3048.02	3047.13	150	4.	1015
0	III	2688.889	2688.092	0	1032		0	III	3060.19	3059.30	90	4.	1015
0	III	2692.367	2691.569	0	1032		0	III	3066.01	3065.13	0	26.	1015

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	III	3068.95	3068.06	0	26.	1015		0	III	3356.88	3355.92	25	28.	1015	
0	III	3069.68	3068.79	1	26.	1015	P	0	III	3364.80	3363.83	4	11.	1015	
0	III	3075.20	3074.31	1	26.	1015	P	0	III	3370.37	3369.40	0	11.	1015	
0	III	3075.76	3074.87	0	26.	1015	P	0	III	3377.79	3376.82	4	27.	1015	
0	III	3076.15	3075.26	1	26.	1015	P	0	III	3383.66	3382.69	25	27.	168	
0	III	3076.96	3076.07	1	26.	1015	P	0	III	3384.82	3383.85	10	27.	168	
0	III	3084.69	3083.80	4	26.	1015	P	0	III	3385.92	3384.95	40	27.	168	
0	III	3085.64	3084.75	1	26C	1015	P	0	III	3395.29	3394.32	4	27.	168	P
0	III	3089.06	3088.16	10	26.	168	P	0	III	3406.71	3405.74	10	15.	1015	
0	III	3096.85	3095.96	0	26.	1015	P	0	III	3409.11	3408.13	4	15.	1015	
0	III	3116.63	3115.73	40	12.	1015		0	III	3416.27	3415.29	25	15.	1015	
0	III	3122.62	3121.71	60	12.	1015		0	III	3429.65	3428.67	25	15.	1015	
0	III	3133.77	3132.86	90	12.	1015		0	III	3431.56	3430.60	40	15.	1015	
0	III	3202.04	3201.11	4	31.	1015	P	0	III	3440.98	3439.99	40	13.	1015	P
0	III	3208.04	3207.12	4	31.	1015		0	III	3445.09	3444.10	60	15.	1015	
0	III	3217.05	3216.12	4	31.	1015	P	0	III	3447.72	3446.73	10	25.	1015	
0	III	3239.50	3238.57	60	9.	1015		0	III	3448.21	3447.22	4	25.	1015	
0	III	3253.88	3252.94	10	9.	1015		0	III	3449.04	3448.05	2	25.	1015	
0	III	3255.517	3254.579	1		1032		0	III	3451.93	3450.94	40	25.	1015	
0	III	3258.174	3257.236	4		1032		0	III	3452.32	3451.33	4	25.	1015	
0	III	3259.765	3258.826	1		1032		0	III	3455.89	3454.90	10	25.	1015	
0	III	3261.92	3260.98	150	8.	1015		0	III	3456.11	3455.12	60	25.	1015	
0	III	3266.40	3265.46	250	8.	1015		0	III	3460.51	3459.52	1	25.	1015	
0	III	3268.25	3267.31	60	8.	1015		0	III	3460.97	3459.98	10	25.	1015	
0	III	3280.86	3279.92	4	29.	1015	P	0	III	3467.14	3466.15	10	25.	1015	
0	III	3282.89	3281.94	25	8.	1015		0	III	3467.89	3466.90	1	25.	1015	
0	III	3285.52	3284.57	40	8.	1015									
0	III	3300.31	3299.36	25	3.	1015									
0	III	3306.79	3305.84	1	8.	1015	P	0	IV	2121.25	2120.58	4		86	
0	III	3313.25	3312.30	60	3.	1015		0	IV	2133.31	2132.64	10		86	
								0	IV	2385.34	2384.61	120		86	
								0	IV	2450.12	2449.37	300		86	
								0	IV	2450.78	2450.04	300		86	
0	III	3327.11	3326.16	1	28.	1015									
0	III	3331.36	3330.40	40	22.	168									
0	III	3333.45	3332.49	4	28.	1015		0	IV	2494.19	2493.44	300		86	
0	III	3333.96	3333.00	40	22.	1015		0	IV	2494.52	2493.77	300		86	
0	III	3337.74	3336.78	25	28.	1015		0	IV	2494.74	2494.00	F		86	H
								0	IV	2500.03	2499.28	120		86	
0	III	3341.70	3340.74	90	3.	1015		0	IV	2502.56	2501.81	120		86	
0	III	3345.22	3344.26	10		1015									
0	III	3349.01	3348.05	10	28.	1015									
0	III	3351.64	3350.68	25	22.	1015									
0	III	3351.95	3350.99	40	22.	1015									

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
0	IV	2508.48	2507.73	300		86		0	IV	3217.23	3216.30	F	7.	86	H
0	IV	2509.95	2509.19	350		86		0	IV	3349.04	3348.08	350	4.	86	
0	IV	2511.30	2510.60	25		86		0	IV	3350.07	3349.11	400	4.	86	
0	IV	2518.0	2517.2	300		86		0	IV	3355.23	3354.27	250	8.	86	
0	IV	2758.98	2758.16	120		86		0	IV	3363.52	3362.56	F	8.	86	
0	IV	2759.87	2759.05	90		86		0	IV	3376.37	3375.40	300	8.	86	
0	IV	2782.04	2781.21	F		86		0	IV	3379.03	3378.06	200	4.	86	
0	IV	2788.05	2787.23	F		86		0	IV	3382.17	3381.20	570	3.	86	
0	IV	2793.72	2792.90	10		86		0	IV	3386.49	3385.52	570	3.	86	
0	IV	2804.42	2803.59	25		86		0	IV	3391.16	3390.19	F	3.	86	H
0	IV	2806.67	2805.84	150		86		0	IV	3397.75	3396.79	400	3.	86	
0	IV	2813.24	2812.41	10		86		0	IV	3404.50	3403.52	570	2.	86	
0	IV	2817.39	2816.56	200		86		0	IV	3406.75	3405.78	10	3.	86	
0	IV	2829.99	2829.16	40		86		0	IV	3410.64	3409.66	350	3.	86	
0	IV	2837.09	2836.26	250		86		0	IV	3412.67	3411.69	650	2.	86	
0	IV	2917.15	2916.30	200		86		0	IV	3414.62	3413.64	350	2.	86	
0	IV	2922.31	2921.45	250		86		0	IV	3426.55	3425.57	200	3.	86	
0	IV	2927.03	2926.17	90		86		0	IV	3490.83	3489.83	300		86	
0	IV	3028.92	3028.04	120	5.	86		0	IV	3493.24	3492.24	250		86	
0	IV	3053.42	3052.53	150	5.	86		0	IV	3494.41	3493.41	25		86	
0	IV	3064.31	3063.42	700	1.	86		0	IV	3561.41	3560.39	350		86	
0	IV	3072.50	3071.61	650	1.	86		0	IV	3564.35	3563.33	400		86	
0	IV	3178.81	3177.89	90	7.	86									
0	IV	3181.80	3180.87	150	7.	86		0	V	2619.59	2618.81	3		83	
0	IV	3186.78	3185.86	120	7.	86		0	V	2620.66	2619.88	7		83	
0	IV	3189.17	3188.25	90	7.	86		0	V	2696.24	2695.44	60		83	
0	IV	3189.58	3188.66	90	7.	86		0	V	2700.84	2700.04	25		83	
0	IV	3195.72	3194.79	200	7.	86		0	V	2707.63	2706.83	25		83	
0	IV	3200.47	3199.55	120	7.	86									
0	IV	3210.59	3209.66	250	7.	86		0	V	2712.33	2711.53	25		83	
								0	V	2730.15	2729.34	25		83	
								0	V	2732.26	2731.45	15		83	
								0	V	2744.39	2743.58	15		83	
								0	V	2753.05	2752.24	25		83	
								0	V	2755.51	2754.70	15		83	
								0	V	2755.92	2755.11	100		83	
								0	V	2756.73	2755.91	7		83	
								0	V	2757.79	2756.98	7		83	
								0	V	2770.58	2769.76	25		83	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
O	V	2781.83	2781.01	1000		83		P	I	2243.23	2242.53	25	3.	496	
O	V	2787.81	2786.99	920		83		P	I	2433.68	2432.94	1		594	
O	V	2790.67	2789.85	775		83		P	I	2451.79	2451.05	7		496	
O	V	2942.19	2941.33	200		83		P	I	2534.748	2533.987	500	8.	496	
O	V	2942.51	2941.65	210		83		P	I	2536.368	2535.606	700	8.	496	
O	V	2993.90	2993.00	7		83		P	I	2554.019	2553.253	600	8.	496	
O	V	3059.57	3058.68	1		168		P	I	2555.662	2554.904	500	8.	496	
O	V	3079.84	3078.95	7		83		P	I	2676.102	2675.307	50	7.	496	
O	V	3145.57	3144.66	160		83		P	I	2677.922	2677.126	80	7.	496	
O	V	3157.02	3156.11	80		83		P	I	2686.964	2686.165	30	7.	496	
O	V	3169.02	3168.10	60		83		P	I	2688.799	2688.000	50	7.	496	
O	V	3173.22	3172.31	40		83									
O	V	3177.79	3176.87	60		83									
O	V	3276.57	3275.63	3		83		P	II	2196.26	2195.57	10		496	
O	VI	2070.58	2069.92	90		71		P	II	2211.03	2210.34	25		496	
O	VI	2070.95	2070.29	160		71		P	II	2267.02	2266.32	20		496	
O	VI	2082.84	2082.18	40		71		P	II	2278.65	2277.95	0		431	
O	VI	3434.67	3433.69	250		71		P	II	2281.70	2281.00	25	6.	496	
O	VII	2450.7	2450.0			97		P	II	2285.82	2285.11	40	6.	496	
O	VIII	2214.8	2214.1			309		P	II	2287.19	2286.48	30	6.	496	
O	VIII	2531.1	2530.4			309		P	II	2290.20	2289.49	5	6.	496	
O	VIII	2562.9	2562.1			309		P	II	2299.03	2298.32	10	6.	496	
O	VIII	2636.1	2635.3			309		P	II	2302.08	2301.38	00		431	
O	VIII	2907.0	2906.1			309									
P	I	2021.81	2021.15	5		496		P	II	2311.05	2310.34	0		431	
P	I	2022.85	2022.20	20		496		P	II	2315.42	2314.70	10		496	
P	I	2024.14	2023.48	100	10.	496		P	II	2317.75	2317.04	1		496	
P	I	2025.18	2024.52	70	10.	496		P	II	2319.71	2319.00	0		431	
P	I	2033.09	2032.43	80	10.	496		P	II	2322.45	2321.74	10		496	
P	I	2034.13	2033.47	150	10.	496		P	II	2324.16	2323.45	1		496	
P	I	2136.14	2135.47	100	4.	496		P	II	2326.53	2325.81	0		431	
P	I	2136.86	2136.18	200	4.	496		P	II	2328.51	2327.79	00		431	
P	I	2149.82	2149.14	200	4.	496		P	II	2329.83	2329.11	0		431	
P	I	2153.62	2152.94	100	9.	496		P	II	2331.27	2330.55	0		431	
P	I	2154.78	2154.08	150	9.	496		P	II	2332.07	2331.35	0		496	
P	I	2223.26	2222.57	10	3.	496		P	II	2334.66	2333.95	4		496	
P	I	2224.04	2223.35	25	3.	496		P	II	2336.40	2335.68	00		431	
P	I	2235.65	2234.95	20	3.	496		P	II	2346.57	2345.85	00		431	
P	I	2236.43	2235.73	50	3.	496		P	II	2355.20	2354.48	0		431	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
P	II	2390.78	2390.05	1			P	II	2606.838	2606.059	150	4.	496
P	II	2394.32	2393.59	0		496	P	II	2608.53	2607.75	0		431
P	II	2398.17	2397.44	1		496	P	II	2625.514	2624.731	40	4.	496
P	II	2438.50	2437.76	0		496	P	II	2626.962	2626.178	100	4.	496
P	II	2453.99	2453.25	3		496	P	II	2629.366	2628.582	70	4.	496
P	II	2455.25	2454.51	15		496	F	II	2632.49	2631.70	0		431
P	II	2481.50	2480.75	1	5.	496	F	II	2637.542	2636.756	90	4.	496
P	II	2482.790	2482.041	40	5.	496	P	II	2638.995	2638.209	60	4.	496
P	II	2484.943	2484.193	100	5.	496	P	II	2661.22	2660.42	0		431
P	II	2486.54	2485.79	7		496	P	II	2708.80	2708.00	0		431
P	II	2496.820	2496.067	40	5.	496	P	II	2711.057	2710.254	3		496
P	II	2498.125	2497.372	70	5.	496	P	II	2733.41	2732.60	00		431
P	II	2501.714	2500.960	40	5.	496	P	II	2748.443	2747.630	5		496
P	II	2509.28	2508.53	0		431	P	II	2750.24	2749.43	0		431
P	II	2604.466	2603.688	30	4.	496	P	II	2756.08	2755.27	0		431
							P	II	2758.21	2757.39	0		431
							P	II	2763.13	2762.31	0		431
							P	II	2767.29	2766.48	00		431
							P	II	2774.14	2773.32	00		431
							P	II	2824.519	2823.689	15		496
							P	II	2825.900	2825.069	10		496
							P	II	2827.104	2826.272	25		496
							P	II	2828.36	2827.52	00		431
							P	II	2839.84	2839.01	0		431
							P	II	2842.32	2841.49	00		431
							P	II	2850.99	2850.16	00		431
							P	II	2859.59	2858.75	0		431
							P	II	2876.997	2876.153	15		496
							P	II	2885.08	2884.23	0		431
							P	II	2885.54	2884.70	0		431
							P	II	2886.729	2885.883	10		496
							P	II	2890.87	2890.02	1		496
							P	II	2899.594	2898.745	10		496
							P	II	2906.28	2905.43	0		431
							P	II	2909.186	2908.334	10		496
							P	II	2913.726	2912.872	10		496
							P	II	2915.287	2914.433	5		496
							P	II	2919.313	2918.459	20		496
							P	II	2921.96	2921.10	0		431
							P	II	2943.760	2942.899	4		496

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
P	111	2748.527	2747.715	1	936		P	111	2958.955	2958.090	4	936	
P	111	2753.274	2752.461	60	936		P	111	2964.758	2963.892	1	936	
P	111	2759.161	2758.346	90	936		P	111	2967.799	2966.933	1	936	
P	111	2771.609	2770.791	1	936		P	111	2977.014	2976.145	25	936	
P	111	2772.364	2771.546	4	936		P	111	2978.111	2977.242	10	936	
P	111	2775.778	2774.959	4	936		P	111	2978.545	2977.676	10	936	
P	111	2780.607	2779.787	10	936		P	111	2980.741	2979.871	4	936	
P	111	2781.367	2780.547	60	936		P	111	2981.025	2980.155	1	936	
P	111	2781.658	2780.838	40	936		P	111	2992.095	2991.222	4	936	
P	111	2790.724	2789.901	25	936		P	111	3008.359	3007.483	1	936	
P	111	2857.797	2856.958	4	936		P	111	3025.647	3024.766	10	936	
P	111	2862.893	2862.053	60	936		P	111	3036.793	3035.909	1	936	
P	111	2866.916	2866.074	150	936		P	111	3038.821	3037.937	40	936	
P	111	2873.871	2873.028	25	936		P	111	3064.061	3063.170	4	936	
P	111	2878.370	2877.525	90	936		P	111	3075.801	3074.907	10	936	
P	111	2879.474	2878.629	4	936		P	111	3081.904	3081.010	1	936	
P	111	2883.540	2882.695	120	936		P	111	3096.512	3095.614	1	936	
P	111	2884.665	2883.819	150	936		P	111	3111.896	3110.994	10	936	
P	111	2885.083	2884.237	4	936		P	111	3115.210	3114.307	1	936	
P	111	2888.075	2887.228	40	936		P	111	3116.365	3115.461	1	936	
P	111	2896.089	2895.241	250	936		P	111	3125.053	3124.147	40	936	
P	111	2903.733	2902.882	1	936		P	111	3126.415	3125.509	10	936	
P	111	2904.699	2903.849	1	936		P	111	3130.289	3129.382	4	936	
P	111	2911.217	2910.365	40	936		P	111	3131.208	3130.300	120	936	
P	111	2911.495	2910.643	1	936		P	111	3132.412	3131.504	10	936	
P	111	2912.740	2911.888	25	936		P	111	3145.152	3144.241	90	936	
P	111	2919.492	2918.637	4	936		P	111	3150.628	3149.716	4	936	
P	111	2920.718	2919.863	1	936		P	111	3152.342	3151.429	25	936	
P	111	2921.550	2920.695	4	936		P	111	3154.008	3153.095	4	936	
P	111	2923.876	2923.020	10	936		P	111	3155.521	3154.607	4	936	
P	111	2924.709	2923.853	25	936		P	111	3156.832	3155.918	4	936	
P	111	2925.358	2924.502	40	936		P	111	3158.543	3157.629	60	936	
P	111	2928.145	2927.289	10	936		P	111	3163.195	3162.279	90	936	
P	111	2928.547	2927.690	10	936		P	111	3163.438	3162.522	10	936	
P	111	2937.661	2936.802	1	936		P	111	3164.661	3163.745	120	936	
P	111	2938.244	2937.385	10	936		P	111	3172.692	3171.774	120	936	
P	111	2940.575	2939.716	4	936		P	111	3176.320	3175.402	10	936	
P	111	2946.002	2945.141	4	936		P	111	3177.672	3176.753	10	936	
P	111	2946.251	2945.390	40	936		P	111	3181.819	3180.899	25	936	
P	111	2948.763	2947.901	1	936		P	111	3182.198	3181.278	40	936	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
P	III	3185.735	3184.814	150	936		P	III	3494.060	3493.061	4	936	
P	III	3187.107	3186.186	250	936		P	III	3505.645	3504.643	40	936	
P	III	3188.141	3187.219	25	936		P	III	3516.649	3515.644	4	936	
P	III	3195.505	3194.581	10	936		P	III	3542.560	3541.549	4	936	
P	III	3201.059	3200.134	10	936		P	III	3545.400	3544.388	10	936	
P	III	3202.568	3201.643	25	936		P	III	3548.819	3547.805	1	936	
P	III	3203.379	3202.453	60	936		P	III	3553.562	3552.547	150	936	
P	III	3204.332	3203.407	40	936		P	III	3556.040	3555.025	4	936	
P	III	3210.275	3209.348	4	936		P	III	3557.562	3556.546	200	936	
P	III	3212.253	3211.325	1	936								
P	III	3214.039	3213.111	10	936		P	IV	2016.203	2015.552	1	937	
P	III	3219.091	3218.162	10	936		P	IV	2089.369	2088.705	200	937	
P	III	3220.236	3219.307	300	936	4.	P	IV	2094.967	2094.301	4	937	
P	III	3221.486	3220.555	10	936		P	IV	2096.112	2095.446	4	937	
P	III	3222.350	3221.420	40	936		P	IV	2207.190	2206.502	40	937	
P	III	3233.656	3232.723	4	936		P	IV	2243.138	2242.442	25	937	
P	III	3234.470	3233.536	150	936	4.	P	IV	2247.961	2247.264	10	937	
P	III	3234.536	3233.602	400	936	4.	P	IV	2303.33	2302.62	1	937	
P	III	3236.313	3235.379	1	936		P	IV	2303.52	2302.81	1	937	
P	III	3254.416	3253.478	10	936		P	IV	2335.349	2334.633	25	937	
P	III	3260.012	3259.073	25	936		P	IV	2462.793	2462.048	4	937	
P	III	3277.537	3276.592	4	936		P	IV	2462.904	2462.159	4	937	
P	III	3278.759	3277.815	120	936		P	IV	2464.78	2464.04	1.	597	
P	III	3281.131	3280.185	40	936		P	IV	2468.606	2467.860	4	937	
P	III	3284.217	3283.271	60	936		P	IV	2478.572	2477.823	200	937	
P	III	3285.446	3284.499	4	936		P	IV	2478.818	2478.070	150	937	
P	III	3337.721	3336.761	4	936		P	IV	2479.005	2478.256	250	937	
P	III	3361.408	3360.442	40	936		P	IV	2498.08	2497.33	100	597	
P	III	3373.726	3372.757	90	936		P	IV	2548.645	2547.880	90	937	
P	III	3396.340	3395.365	60	936		P	IV	2582.865	2582.092	60	937	
P	III	3431.337	3430.354	4	936		P	IV	2606.284	2605.506	250	937	
P	III	3443.001	3442.014	4	936		P	IV	2614.925	2614.144	4	937	
P	III	3450.148	3449.160	1	936		P	IV	2619.679	2618.897	10	937	
P	III	3460.449	3459.458	4	936		P	IV	2628.092	2627.308	10	937	
P	III	3471.864	3470.870	40	936		P	IV	2633.955	2633.170	1	937	
P	III	3475.171	3474.177	90	936		P	IV	2643.278	2642.491	10	937	
P	III	3478.342	3477.346	40	936		P	IV	2645.083	2644.295	400	937	
P	III	3485.994	3484.997	60	936		P	IV	2666.562	2665.769	10	937	
P	III	3489.814	3488.816	120	936		P	IV	2697.249	2696.449	25	937	
P	III	3492.519	3491.520	4	936		P	IV	2698.945	2698.144	60	937	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
P	IV	2712.049	2711.245	90		937	
P	IV	2713.208	2712.404	25		937	
P	IV	2724.262	2723.455	1		937	
P	IV	2725.571	2724.764	300		937	
P	IV	2727.058	2726.251	25		937	
P	IV	2729.578	2728.770	400		937	
P	IV	2729.928	2729.120	200		937	
P	IV	2733.045	2732.236	40		937	
P	IV	2740.119	2739.309	500		937	
P	IV	2740.683	2739.872	250		937	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
P	IV	2741.033	2740.223	200		937	
P	IV	2751.011	2750.198	10		937	
P	IV	2760.236	2759.421	40		937	
P	IV	2777.030	2776.210	60		937	
P	IV	2799.155	2798.330	25		937	
P	IV	2799.529	2798.704	10		937	
P	IV	2816.798	2815.969	40		937	
P	IV	2850.747	2849.909	1		937	
P	IV	2857.80	2856.96	40		937	
P	IV	2858.07	2857.23	40		937	
P	IV	2862.275	2861.435	25		937	
P	IV	2862.893	2862.053	F		937	
P	IV	2863.723	2862.882	10		937	
P	IV	2920.497	2919.642	40		937	
P	IV	2921.972	2921.117	4		937	
P	IV	2928.547	2927.690	25		937	
P	IV	2932.097	2931.240	90		937	
P	IV	2936.837	2935.978	10		937	
P	IV	2948.953	2948.091	40		937	
P	IV	2956.377	2955.513	60		937	
P	IV	2961.070	2960.205	4		937	
P	IV	2962.107	2961.242	200		937	
P	IV	2970.505	2969.638	10		937	
P	IV	2970.956	2970.089	120		937	
P	IV	2977.014	2976.145	25		937	
P	IV	2977.518	2976.649	60		937	
P	IV	3043.867	3042.980	4		937	
P	IV	3072.671	3071.778	150		937	
P	IV	3141.238	3140.328	60		937	
P	IV	3200.783	3199.858	25		937	
P	IV	3201.141	3200.216	40		937	
P	IV	3201.257	3200.332	90		937	
P	IV	3225.091	3224.160	25		937	
P	IV	3225.886	3224.954	90		937	
P	IV	3230.842	3229.910	25		937	
P	IV	3243.203	3242.267	90		937	
P	IV	3245.035	3244.099	4		937	
P	IV	3255.815	3254.876	40		937	
P	IV	3258.591	3257.652	120		937	
P	IV	3265.365	3264.424	60		937	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
P	IV	3348.698	3347.736	650	1.	937		P	V	3204.96	3204.04	15		597	
P	IV	3361.684	3360.718	60		937		P	V	3204.963	3204.037	520		524	
P	IV	3365.434	3364.467	570	1.	937		S		2008.	2007.			107	N
P	IV	3367.143	3366.176	60		937		S		2028.	2027.			107	N
P	IV	3372.090	3371.122	400	1.	937		S		2055.	2054.			107	N
								S		2069.	2068.			107	N
P	IV	3379.757	3378.786	200		937		S		2090.	2089.			107	N
P	IV	3380.208	3379.237	90		937									
P	IV	3399.446	3398.470	90		937		S		2098.	2097.			107	N
P	IV	3408.103	3407.125	150		937		S		2234.	2233.			107	N
P	IV	3413.083	3412.105	40		937		S		2251.	2250.			107	N
								S		2262.	2261.			107	N
P	IV	3413.632	3412.653	120		937		S		2304.	2303.			107	N
P	IV	3414.523	3413.543	200		937									
P	IV	3421.667	3420.686	40		937		S		2334.	2333.			107	N
P	IV	3425.120	3424.138	90		937		S		2354.	2353.			107	N
P	IV	3425.684	3424.702	120		937		S		2409.	2408.			107	N
								S		2421.	2420.			107	N
P	IV	3431.165	3430.182	120		937		S		2434.	2433.			107	N
P	IV	3446.915	3445.928	90		937									
P	IV	3456.148	3455.158	40		937		S		2522.	2521.			107	N
P	IV	3546.122	3545.109	40		937		S		2595.	2594.			107	N
P	IV	3556.036	3555.021	90		937		S		2884.	2883.			107	N
								S		2983.	2982.			107	N
P	V	2180.725	2180.042	50		524		S		3111.	3110.			107	N
P	V	2180.969	2180.286	200		524									
P	V	2187.103	2186.419	150		524		S		3139.	3138.			107	N
P	V	2425.08	2424.34	7		597		S		3308.	3307.			107	N
P	V	2425.139	2424.403	375		524		S		3344.	3343.			107	N
								S		3404.	3403.			107	N
P	V	2441.49	2440.75	40		597		S		3434.	3433.			107	N
P	V	2441.674	2440.934	450		524									
P	V	2441.78	2441.04	3		597		S		3497.	3496.			107	N
P	V	2441.979	2441.239	200		524									
P	V	2670.024	2669.230	50		524		S	II	2005.03	2004.38	300		285	
								S	II	2237.57	2236.87	500		285	
P	V	2772.596	2771.778	30		524		S	II	2297.67	2296.96	600		285	Q
P	V	2782.916	2782.095	80		524		S	II	2508.77	2508.01	300		285	
P	V	2961.862	2960.997	300		524		S	II	2512.47	2511.72	0		285	
P	V	2962.25	2961.39	7		597									
P	V	2979.423	2978.554	450		524									
P	V	2979.45	2978.58	15		52		S	II	2629.8	2629.1	200	11.	285	
P	V	2993.706	2992.833	4		524		S	II	2638.9	2638.1	100	11.	285	
P	V	3176.010	3175.091	700		524		S	II	2661.1	2660.3	100	11.	285	
P	V	3176.06	3175.14	40		597		S	II	2670.77	2670.02	300	11.	285	
P	V	3187.652	3186.731	30		524		S	II	2700.67	2699.87	300		285	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
S	II	2818.33	2817.50	300	.	285
S	II	2826.73	2825.90	300	.	285
S	II	2837.4C	2836.64	300	.	285
S	II	2838.40	2837.63	300	.	285
S	II	2848.56	2847.73	300	10.	285
S	II	2881.84	2881.01	300	10.	285
S	II	2887.76	2886.90	100	.	285
S	II	3016.6	3015.7	200	.	322
S	II	3258.74	3257.80	200	17.	285
S	II	3273.19	3272.25	0	17.	285
S	III	2089.7	2089.0	300	.	285
S	III	2097.9	2097.2	300	.	285
S	III	2098.4	2097.7	300	.	285
S	III	2123.9	2123.2	300	.	285
S	III	2125.1	2124.4	400	.	285
S	III	2166.15	2165.47	100	.	285
S	III	2170.45	2169.76	100	.	285
S	III	2177.98	2177.30	200	.	285
S	III	2178.80	2178.12	100	.	285
S	III	2187.82	2187.14	200	.	285
S	III	2189.27	2188.58	200	.	285
S	III	2191.36	2190.67	200	.	285
S	III	2193.19	2192.50	200	.	285
S	III	2198.79	2198.10	100	.	285
S	III	2200.95	2200.26	100	.	285
S	III	2230.07	2229.37	400	.	285
S	III	2253.78	2253.08	200	.	285
S	III	2270.96	2270.26	300	.	285
S	III	2271.73	2271.02	200	.	285
S	III	2333.36	2332.64	500	.	285
S	III	2337.10	2336.38	600	.	285
S	III	2358.64	2357.92	300	.	285
S	III	2359.93	2359.21	200	.	285
S	III	2361.89	2361.17	200	.	285
S	III	2406.36	2405.63	3	.	598
S	III	2423.65	2422.91	7	.	598
S	III	2443.36	2442.62	50	17.	323
S	III	2461.24	2460.50	250	17.	323
S	III	2490.34	2489.59	250	17.	323
S	III	2497.00	2496.24	300	17.	323

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLÉT	REFERENCE	NOTES
S	III 2499.83	2499.08	300	17.	323	
S	III 2508.90	2508.15	350	17.	323	
S	III 2594.65	2593.87	3		598	
S	III 2637.67	2636.88	200	19.	323	
S	III 2666.19	2665.40	350	19.	323	
S	III 2681.27	2680.47	200	19.	323	
S	III 2692.48	2691.68	250	19.	323	
S	III 2703.56	2702.76	250	19.	323	
S	III 2709.84	2709.03	100	16.	323	
S	III 2714.09	2713.28	100	16.	323	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
S	III	2719.68	2718.88	350	16.	323	S	IV	2133.	2132.		107	
S	III	2722.21	2721.40	250	19.	323	S	IV	2146.	2145.		107	
S	III	2727.63	2726.82	350	20.	323	S	IV	2271.	2270.		107	
S	III	2731.91	2731.10	350	16.	323	S	IV	2284.	2283.		107	
S	III	2741.82	2741.01	250	16.	323	S	IV	2387.	2386.		107	
S	III	2750.75	2749.94	3		598	S	IV	2399.	2398.		107	
S	III	2757.70	2756.89	400	16.	323	S	IV	3098.36	3097.46	500	1.	1015
S	III	2776.07	2775.25	250	16.	323	S	IV	3118.65	3117.75	300	1.	1015
S	III	2779.64	2778.82	50		323							
S	III	2786.31	2785.49	300	20.	323							
S	III	2798.21	2797.39	200	20.	323	S	V	2126.	2125.		90	
S	III	2856.86	2856.02	400	15.	323	S	V	2132.	2131.		90	
S	III	2864.37	2863.53	500	15.	323	S	V	2146.	2145.		90	
S	III	2872.84	2872.00	200	15.	323	S	V	2271.	2270.		90	
S	III	2891.	2890.			107	S	V	2285.	2284.		90	
S	III	2897.56	2896.71	0	15.	323	S	V	2292.	2291.		90	
S	III	2905.16	2904.31	300	15.	323	S	V	2639.68	2638.89	400	51	
S	III	2949.20	2948.34	200	18.	323	S	V	2659.98	2659.19	200	51	
S	III	2951.09	2950.23	300	18.	323	S	V	2666.21	2665.42	100	51	
S	III	2962.69	2961.83	0	18.	323							
S	III	2965.66	2964.80	400	18.	323	S	VI	2070.	2069.		90	
S	III	2984.	2983.			107	S	VI	2080.	2079.		107	
S	III	2986.85	2985.98	600	18.	323	S	VI	2588.12	2587.35	100	52	
S	III	2999.	2998.			107	S	VI	2619.14	2618.36	0	52	
S	III	3009.69	3008.82	0		598	S	VI	3433.	3432.		90	
S	III	3136.90	3136.00	150	13.	323	SC	I	2693.58	2692.78	1	2.	488
S	III	3186.06	3185.16	150	13.	323	SC	I	2699.92	2699.12	6		1030
S	III	3232.03	3231.10	150	3.	323	SC	I	2707.58	2706.78	2	1.	488
S	III	3234.17	3233.24	150	3.	323	SC	I	2708.75	2707.95	1	2.	488
S	III	3235.09	3234.17	200	3.	323	SC	I	2712.16	2711.36	2	1.	488
S	III	3324.94	3323.99	400	2.	323	SC	I	2730.15	2729.34	0		1030
S	III	3325.81	3324.85	600	2.	323	SC	I	2747.24	2746.43	1		1030
S	III	3368.15	3367.18	400	2.	323	SC	I	2747.97	2747.16	1		1030
S	III	3370.43	3369.47	300	2.	323	SC	I	2752.97	2752.16	1		1030
S	III	3371.34	3370.37	400	2.	323	SC	I	2769.70	2768.88	0		1030
S	III	3388.08	3387.12	400	2.	323	SC	I	2833.17	2832.34	2		1030
							SC	I	2838.15	2837.32	2		1030
							SC	I	2871.30	2870.46	1		1030
							SC	I	2885.14	2884.30	1		1030
							SC	I	2885.93	2885.09	1		1030

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
SC	I	2929.13	2928.28	1		1030	M	SC	I	3093.33	3092.43	2		1030	M
SC	I	2934.93	2934.07	2		1030	M	SC	I	3095.53	3094.63	1		1030	M
SC	I	2943.73	2942.87	1		1030	M	SC	I	3096.25	3095.35	1		1028	
SC	I	2966.73	2965.86	2	11.	1015		SC	I	3099.50	3098.60	1		1030	M
SC	I	2974.874	2974.006	5	11.	1015		SC	I	3100.34	3099.44	1		1030	M
SC	I	2981.619	2980.752	6	11.	1015		SC	I	3103.05	3102.15	1		1028	
SC	I	2989.821	2988.952	10	11.	1015		SC	I	3103.26	3102.36	1		1030	M
SC	I	3016.241	3015.364	8	10.	1015		SC	I	3106.57	3105.67	1		1028	
SC	I	3020.228	3019.350	10	10.	1015		SC	I	3106.91	3106.01	1		1030	M
SC	I	3031.651	3030.769	3	10.	1015		SC	I	3107.44	3106.54	1		1030	M
SC	I	3040.64	3039.76	0		1028		SC	I	3110.25	3109.35	2		1030	M
SC	I	3057.19	3056.30	1		1030	M	SC	I	3111.14	3110.24	1		1028	
SC	I	3061.89	3061.00	0		1028		SC	I	3113.01	3112.11	1		1030	M
SC	I	3064.63	3063.74	0		1030	M	SC	I	3114.26	3113.36	1		1030	M
SC	I	3069.06	3068.17	1		1028		SC	I	3115.68	3114.78	1		1030	M
SC	I	3074.22	3073.33	1		1028		SC	I	3118.10	3117.20	0		1030	M
SC	I	3077.93	3077.04	1		1030	M	SC	I	3118.72	3117.82	2		1028	
SC	I	3079.35	3078.46	1		1030	M	SC	I	3120.57	3119.67	1		1028	
SC	I	3080.84	3079.95	1		1030	M	SC	I	3124.85	3123.95	1		1030	M
SC	I	3081.12	3080.23	1		1030	M	SC	I	3125.84	3124.94	1		1030	M
SC	I	3082.45	3081.56	1		1028		SC	I	3128.60	3127.70	1		1030	M
SC	I	3084.17	3083.28	1		1030	M	SC	I	3134.22	3133.31	2		1030	M
SC	I	3086.19	3085.30	1		1030	M	SC	I	3139.27	3138.36	2		1030	M
SC	I	3088.25	3087.35	1		1030	M	SC	I	3141.65	3140.74	1		1030	M
SC	I	3090.68	3089.78	2		1030	M	SC	I	3159.45	3158.54	1		1030	M
								SC	I	3189.21	3188.29	1		1030	M
								SC	I	3203.49	3202.56	00		1028	
								SC	I	3207.93	3207.01	0		1028	
								SC	I	3214.71	3213.78	0		1028	
								SC	I	3216.61	3215.68	2		1030	M
								SC	I	3220.88	3219.95	0		1028	
								SC	I	3221.70	3220.77	3		1030	M
								SC	I	3234.15	3233.22	1		1030	M
								SC	I	3256.616	3255.678	6	9.	1015	
								SC	I	3270.846	3269.904	15	9.	1015	
								SC	I	3274.562	3273.619	20	9.	1015	
								SC	I	3334.49	3333.53	1		1030	M
								SC	I	3350.18	3349.22	1		1028	
								SC	I	3352.16	3351.20	1		1028	
								SC	I	3361.22	3360.26	1		1028	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
SC	IV	2035.749	2035.095	40		720		SC	IV	2665.760	2664.970	5		720	
SC	IV	2056.715	2056.058	450		720		SC	IV	2671.319	2670.527	40		720	
SC	IV	2073.400	2072.740	220		720		SC	IV	2678.807	2678.013	285		720	
SC	IV	2079.587	2078.925	285		720		SC	IV	2714.408	2713.606	1		720	
SC	IV	2112.630	2111.961	40		720		SC	IV	2723.498	2722.693	20		720	
SC	IV	2113.855	2113.186	220		720		SC	IV	2724.322	2723.517	285		720	
SC	IV	2119.638	2118.969	650		720		SC	IV	2729.601	2728.794	40		720	
SC	IV	2125.064	2124.393	160		720		SC	IV	2755.882	2755.070	40		720	
SC	IV	2165.112	2164.433	360		720		SC	IV	2762.741	2761.927	1		720	
SC	IV	2171.851	2171.172	160		720		SC	IV	2773.853	2773.036	285		720	
SC	IV	2186.114	2185.430	550		720		SC	IV	2810.785	2809.960	220		720	
SC	IV	2206.152	2205.464	550		720		SC	IV	2813.144	2812.318	160		720	
SC	IV	2222.907	2222.216	870		720		SC	IV	2818.367	2817.539	160		720	
SC	IV	2260.982	2260.284	220		720		SC	IV	2837.854	2837.021	160		720	
SC	IV	2272.033	2271.331	550		720		SC	IV	2845.519	2844.683	110		720	
SC	IV	2298.676	2297.970	5		720		SC	IV	2848.996	2848.159	220		720	
SC	IV	2298.816	2298.110	160		720		SC	IV	2857.001	2856.162	1		720	
SC	IV	2307.214	2306.506	160		720		SC	IV	2874.741	2873.900	160		720	
SC	IV	2312.830	2312.120	5		720		SC	IV	2889.150	2888.304	1		720	
SC	IV	2328.170	2327.457	70		720		SC	IV	2906.159	2905.308	5		720	
SC	IV	2333.447	2332.733	160		720		SC	IV	2907.387	2906.536	220		720	
SC	IV	2333.634	2332.920	110		720		SC	IV	2918.873	2918.021	160		720	
SC	IV	2336.003	2335.288	220		720		SC	IV	2919.562	2918.710	220		720	
SC	IV	2343.853	2343.136	40		720		SC	IV	2923.048	2922.195	1		720	
SC	IV	2346.956	2346.238	70		720		SC	IV	2935.263	2934.407	1		720	
SC	IV	2352.062	2351.344	160		720		SC	IV	2948.730	2947.870	1		720	
SC	IV	2356.683	2355.964	160		720		SC	IV	2956.250	2955.388	40		720	
SC	IV	2363.151	2362.430	70		720		SC	IV	2960.205	2959.341	5		720	
SC	IV	2369.138	2368.415	20		720		SC	IV	2973.781	2972.913	1		720	
SC	IV	2378.924	2378.200	1		720		SC	IV	2979.680	2978.811	1		720	
SC	IV	2442.885	2442.147	20		720		SC	IV	2992.850	2991.980	40		720	
SC	IV	2465.204	2464.459	360		720		SC	IV	2996.945	2996.074	40		720	
SC	IV	2468.108	2467.362	1		720		SC	IV	3001.197	3000.324	5		720	
SC	IV	2521.684	2520.927	285		720		SC	IV	3001.627	3000.754	5		720	
SC	IV	2552.202	2551.438	1		720		SC	IV	3010.716	3009.841	20		720	
SC	IV	2587.705	2586.933	550		720		SC	IV	3029.781	3028.900	20		720	
SC	IV	2595.942	2595.167	360		720		SC	IV	3068.371	3067.482	1		720	
SC	IV	2633.114	2632.331	40		720		SC	IV	3079.248	3078.356	5		720	
SC	IV	2646.586	2645.799	110		720		SC	IV	3225.779	3224.850	1		720	
SC	IV	2664.848	2664.058	160		720		SC	IV	3301.986	3301.038	1		720	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
SC	IV	3391.221	3390.248	1		720		SE	II	2888.98	2888.14	1		468	
								SE	II	2896.73	2895.88	350	18.	468	
SC	VI	2031.0	2030.3			108	F	SE	II	2905.92	2905.07	50		468	
SC	VI	2179.3	2178.6			108	F	SE	II	2935.04	2934.18	10		468	
								SE	II	2947.92	2947.13	50		468	
SC	XIII	2638.9	2638.1			913	F P	SE	II	2953.06	2952.28	350	19.	468	
								SE	II	2964.77	2963.91	350	20.	468	
SC	XVII	2191.5	2190.8			913	F P	SE	II	3039.54	3038.66	500	18.	468	
								SE	II	3042.19	3041.31	500	20.	468	
								SE	II	3047.12	3046.24	150	18.	468	
SE	I	2001.12	2000.47	10		588		SE	II	3106.40	3105.50	100		468	
SE	I	2002.87	2002.22	30		588		SE	II	3109.44	3108.54	100	19.	468	
SE	I	2022.45	2021.80	40		600		SE	II	3135.33	3134.42	350		468	
SE	I	2025.13	2024.48	30		588		SE	II	3142.04	3141.13	500		468	
SE	I	2026.51	2025.86	30		588		SE	II	3201.85	3200.93	50		468	
SE	I	2040.47	2039.82	650	2.	588		SE	II	3205.50	3204.58	250	18.	468	
SE	I	2051.09	2050.43	60		600		SE	II	3229.10	3228.17	50		468	
SE	I	2053.14	2052.48	30		588		SE	II	3239.36	3238.43	100		468	
SE	I	2055.02	2054.36	40		600		SE	II	3243.12	3242.19	150		468	
SE	I	2063.45	2062.79	350	2.	588		SE	II	3354.64	3353.67	100		468	
SE	I	2069.01	2068.35	10		588		SE	II	3385.95	3384.98	150		468	
SE	I	2075.41	2074.75	350	1.	588		SE	II	3445.25	3444.27	150		468	
SE	I	2081.74	2081.08	80		600									
SE	I	2136.73	2136.06	10		588		SE	III	2202.23	2201.54	10		587	
SE	I	2139.32	2138.65	10		588		SE	III	2232.08	2231.39	1		587	
SE	I	2147.87	2147.19	60		600		SE	III	2259.98	2259.28	30		587	
SE	I	2164.83	2164.15	150	1.	588		SE	III	2263.82	2263.12	1		587	
SE	I	2333.52	2332.81	150	21.	600		SE	III	2283.32	2282.62	85		587	
SE	I	2414.25	2413.52	600	12.	600									
SE	I	2442.81	2442.07	40		600		SE	III	2308.33	2307.62	1		587	
SE	I	2493.31	2492.56	50		588		SE	III	2350.52	2349.80	50		587	
SE	I	2548.74	2547.98	300	20.	600		SE	III	2354.47	2353.75	30		587	
SE	I	2610.25	2609.47	10		588		SE	III	2371.78	2371.06	150		587	
								SE	III	2390.79	2390.06	85		587	
SE	II	2114.62	2113.95	50		468		SE	III	2392.66	2391.93	1		587	
SE	II	2358.20	2357.48	10		468		SE	III	2400.86	2400.13	50		587	
SE	II	2738.97	2738.16	150	19.	468		SE	III	2415.56	2414.77	30		587	
SE	II	2822.35	2821.52	250	20.	468		SE	III	2421.00	2420.27	120		587	
SE	II	2872.92	2872.08	50	19.	468		SE	III	2436.26	2435.52	10		587	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
SE	III	2441.68	2440.94	50	587		SE	III	2686.58	2685.78	150	587	
SE	III	2453.26	2452.52	1	587		SE	III	2689.92	2689.12	30	587	
SE	III	2460.28	2459.54	150	587		SE	III	2694.02	2693.22	1	14	
SE	III	2465.36	2464.61	1	587		SE	III	2697.15	2696.35	50	587	
SE	III	2494.20	2493.45	50	587		SE	III	2706.76	2705.96	85	587	
SE	III	2495.00	2494.25	150	587		SE	III	2713.53	2712.73	85	587	
SE	III	2513.60	2512.85	30	587		SE	III	2716.74	2715.94	120	587	
SE	III	2514.13	2513.37	10	587		SE	III	2727.36	2726.55	30	587	
SE	III	2545.32	2544.56	1	587		SE	III	2731.38	2730.57	1	587	
SE	III	2547.14	2546.38	30	587		SE	III	2739.77	2738.96	30	587	
SE	III	2566.02	2565.25	1	587		SE	III	2746.67	2745.86	30	587	
SE	III	2567.37	2566.60	30	587		SE	III	2768.02	2767.20	250	587	
SE	III	2572.07	2571.30	120	587		SE	III	2773.28	2772.46	120	587	
SE	III	2581.74	2580.97	10	587		SE	III	2774.63	2773.81	200	587	
SE	III	2587.96	2587.19	1	587		SE	III	2778.34	2777.52	250	587	
SE	III	2591.35	2590.58	30	587		SE	III	2788.53	2787.71	10	14	
SE	III	2606.47	2605.69	1	587		SE	III	2793.16	2792.34	50	587	
SE	III	2618.11	2617.33	150	587		SE	III	2793.95	2793.13	50	587	
SE	III	2629.22	2628.44	30	587		SE	III	2803.07	2802.24	250	587	
SE	III	2654.83	2654.04	150	587		SE	III	2805.21	2804.39	50	587	
SE	III	2655.71	2654.92	10	587		SE	III	2822.35	2821.52	85	587	
SE	III	2657.47	2656.68	10	587		SE	III	2822.90	2822.07	120	587	
SE	III	2660.17	2659.38	1	587		SE	III	2839.51	2838.68	120	587	
SE	III	2675.29	2674.50	10	587		SE	III	2843.97	2843.13	10	587	
SE	III	2679.49	2678.70	30	587		SE	III	2864.68	2863.84	150	587	
							SE	III	2865.27	2864.43	150	587	
							SE	III	2871.01	2870.17	150	587	
							SE	III	2900.12	2899.27	10	587	
							SE	III	2907.91	2907.06	100	14	
							SE	III	2922.68	2921.83	30	587	
							SE	III	2937.97	2937.11	0	587	
							SE	III	2941.00	2940.14	1	587	
							SE	III	2944.88	2944.02	85	587	
							SE	III	2948.70	2947.84	30	587	
							SE	III	2949.32	2948.46	150	587	
							SE	III	2956.59	2955.73	50	14	
							SE	III	2970.83	2969.96	85	587	
							SE	III	2971.82	2970.95	150	587	
							SE	III	2979.96	2979.09	30	587	
							SE	III	2988.32	2987.45	30	587	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
SI	III	2177.576	2176.894	40	77.	768		SI	III	2981.389	2980.519	G	34.	768	
SI	III	2181.519	2180.836	25	77.	768		SI	III	3013.969	3013.091	40	10.1	768	
SI	III	2182.732	2182.049	15	77.	768		SI	III	3033.55	3032.66	25	10.1	768	
SI	III	2222.71	2222.01	7	85.	768		SI	III	3035.615	3034.732	60	10.	768	
SI	III	2296.183	2295.476	60	76.	768		SI	III	3038.171	3037.287	100	10.	768	
SI	III	2297.581	2296.873	160	93.	768		SI	III	3041.818	3040.933	130	10.	768	
SI	III	2301.638	2300.930	100	76.	768		SI	III	3044.817	3043.932	80	8.0	768	
SI	III	2307.14	2306.42	7	79.	768		SI	III	3045.962	3045.076	40	8.0	768	
SI	III	2307.604	2306.889	3	79.	768		SI	III	3047.170	3046.284	15	8.0	768	
SI	III	2307.870	2307.107	G	79.	768		SI	III	3069.130	3068.238	80	10.1	768	
SI	III	2308.901	2308.191	160	76.	768		SI	III	3078.417	3077.523	25	10.1	768	
SI	III	2330.646	2329.931	7	87.	768		SI	III	3084.259	3083.363	7	10.1	768	
SI	III	2419.023	2418.281	G	75.	768		SI	III	3087.122	3086.236	1000	1.	768	
SI	III	2423.831	2423.049	G	75.	768		SI	III	3087.35	3086.46	60	1.	768	
SI	III	2430.09	2429.35	80	75.	768		SI	III	3087.562	3086.666	G	1.	768	
SI	III	2450.226	2449.484	200	78.	768		SI	III	3094.322	3093.424	640	1.	768	
SI	III	2482.257	2481.508	15	89.	768		SI	III	3094.55	3093.65	40	1.	768	
SI	III	2483.946	2483.196	60	89.	768		SI	III	3097.725	3096.826	410	1.	768	
SI	III	2486.387	2485.623	G	89.	768		SI	III	3127.173	3126.267	60	11.	768	
SI	III	2529.276	2528.471	G	81.	768		SI	III	3136.815	3135.906	15	11.	768	
SI	III	2542.581	2541.818	1000	6.09	768		SI	III	3148.283	3147.371	80	11.	768	
SI	III	2546.857	2546.093	160	56.	768		SI	III	3158.073	3157.159	3	11.	768	
SI	III	2559.978	2559.210	315	55.	768		SI	III	3162.525	3161.610	100	8.1	768	
SI	III	2641.575	2640.788	200	86.	768		SI	III	3164.197	3163.281	7		768	
SI	III	2656.302	2655.512	315	84.	768		SI	III	3166.29	3165.38	7		768	
SI	III	2814.761	2813.912	G	88.	768		SI	III	3186.046	3185.125	410	8.	768	
SI	III	2817.940	2817.110	130	88.	768		SI	III	3186.943	3186.022	270	8.0	768	
SI	III	2830.06	2829.23	3	88.	768		SI	III	3197.428	3196.504	315	8.0	768	
SI	III	2830.86	2830.02	3	90.	768		SI	III	3211.482	3210.554	360	8.0	768	
SI	III	2832.323	2831.490	80	88.	768		SI	III	3217.178	3216.249	80	8.1	768	
SI	III	2840.457	2839.622	40	88.	768		SI	III	3231.432	3230.499	230	6.	768	
SI	III	2875.470	2874.626	25	92.	768		SI	III	3234.897	3233.954	315	6.	768	
SI	III	2875.93	2875.09	7	92.	768		SI	III	3242.557	3241.622	360	6.	768	
SI	III	2960.015	2959.150	40	91.	768		SI	III	3251.49	3250.56	3	9.0	768	
SI	III	2960.54	2959.67	15	91.	768		SI	III	3251.73	3250.79	3	9.0	768	
								SI	III	3252.03	3251.07	1	21.	768	
								SI	III	3252.321	3251.383	2	21.	768	
								SI	III	3252.809	3251.871	3	21.	768	
								SI	III	3254.055	3253.117	25	9.0	768	
								SI	III	3254.339	3253.401	80	12.	768	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
TI	I	2230.87	2230.18	70	17.	488		TI	I	2369.29	2368.57	20	13.	488	
TI	I	2231.17	2230.48	70	18.	488		TI	I	2370.01	2369.29	20	13.	488	
TI	I	2234.48	2233.79	80	17.	488		TI	I	2372.67	2371.95	20	12.	488	
TI	I	2238.89	2238.20	60		488	N	TI	I	2372.95	2372.23	10	12.	488	
TI	I	2239.42	2238.73	80	17.	488		TI	I	2375.31	2374.59	30	13.	488	
TI	I	2245.39	2244.69	70	17.	488		TI	I	2378.87	2378.15	30	12.	488	
TI	I	2246.84	2246.14	40		488	N	TI	I	2381.52	2380.80	40	13.	488	
TI	I	2260.78	2260.08	10	15.	488		TI	I	2385.25	2384.52	40	12.	488	
TI	I	2264.77	2264.07	50		488	N	TI	I	2412.10	2411.37	20	11.	488	
TI	I	2268.68	2267.98	40	15.	488		TI	I	2412.31	2411.58	30	11.	488	
TI	I	2269.48	2268.78	40	15.	488		TI	I	2419.10	2418.37	100	11.	488	
TI	I	2273.15	2272.45	10	16.	488		TI	I	2422.04	2421.31	100	11.	488	
TI	I	2273.35	2272.65	80	16.	488		TI	I	2425.00	2424.26	100	11.	488	
TI	I	2274.03	2273.33	80	15.	488		TI	I	2428.98	2428.24	20	10.	488	
TI	I	2277.45	2276.75	100	15.	488		TI	I	2429.10	2428.36	20	11.	488	
TI	I	2280.70	2280.00	120	15.	488		TI	I	2433.97	2433.23	60	10.	488	
TI	I	2284.49	2293.78	30	14.	488		TI	I	2434.83	2434.09	30	11.	488	
TI	I	2294.95	2294.24	30	14.	488		TI	I	2439.02	2438.28	20	10.	488	
TI	I	2300.57	2299.86	100	14.	488		TI	I	2441.72	2440.98	100	10.	488	
TI	I	2303.46	2302.75	100	14.	488		TI	I	2446.86	2446.12	20	10.	488	
TI	I	2306.40	2305.69	120	14.	488		TI	I	2458.54	2457.80	20	9.	488	
TI	I	2309.59	2308.88	20	14.	488		TI	I	2458.74	2458.00	20	9.	488	
TI	I	2314.98	2314.27	20	14.	488		TI	I	2455.711	2454.966	20	9.	488	
TI	I	2365.77	2365.05	10	13.	488		TI	I	2469.106	2468.360	20	9.	488	
TI	I	2369.29	2368.57	20	12.	488		TI	I	2471.72	2470.98	30	9.	488	
								TI	I	2505.274	2504.522	30		488	N
								TI	I	2517.90	2517.14	10	8.	488	
								TI	I	2519.77	2519.01	40	8.	488	
								TI	I	2521.300	2520.543	100	8.	488	
								TI	I	2528.750	2527.991	50	8.	488	
								TI	I	2530.626	2529.866	40	8.	488	
								TI	I	2542.678	2541.917	200	8.	488	
								TI	I	2579.68	2578.91	20	7.	488	
								TI	I	2581.579	2580.809	50		488	N
								TI	I	2583.995	2583.224	20	7.	488	
								TI	I	2587.03	2586.26	30	7.	488	
								TI	I	2591.038	2590.265	50	7.	488	
								TI	I	2594.421	2593.647	30	6.	488	
								TI	I	2595.40	2594.63	20	7.	488	
								TI	I	2597.371	2596.596	100	6.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
TI	I	2600.686	2599.910	250	6.	488		TI	I	2742.63	2741.82	10	31.	488	
TI	I	2605.66	2604.88	30	7.	488		TI	I	2743.11	2742.30	150	25.	488	
TI	I	2605.941	2605.163	250	6.	488		TI	I	2745.657	2744.846	50	30.	488	
TI	I	2612.066	2611.287	250	6.	488		TI	I	2749.875	2749.062	50	30.	488	
TI	I	2612.248	2611.468	80	6.	488		TI	I	2758.210	2757.397	60	30.	488	
TI	I	2620.722	2619.942	100	6.	488		TI	I	2758.874	2758.061	200	35	488	
TI	I	2632.33	2631.55	10	5.	488		TI	I	2803.291	2802.465	150	24.	488	
TI	I	2633.207	2632.424	150	5.	488		TI	I	2806.504	2805.680	60	29.	488	
TI	I	2641.902	2641.116	400	5.	488		TI	I	2809.975	2809.150	50	29.	488	
TI	I	2645.062	2644.275	400	5.	488		TI	I	2813.789	2812.963	20	29.	488	
TI	I	2647.438	2646.650	400	5.	488		TI	I	2818.20	2817.37	30	29.	488	
TI	I	2649.44	2648.65	10	4.	488		TI	I	2818.66	2817.83	20	29.	488	
TI	I	2650.054	2649.306	40		488	N	TI	I	2822.34	2821.51	10	19.	488	
TI	I	2650.385	2649.597	30		488	N	TI	I	2825.89	2825.06	10	19.	488	
TI	I	2653.81	2653.02	20	4.	488		TI	I	2828.88	2828.05	20	19.	488	
TI	I	2655.718	2654.926	50	4.	488		TI	I	2830.86	2830.03	20	19.	488	
TI	I	2657.166	2656.376	40		488	N	TI	I	2832.23	2831.40	10	19.	488	
TI	I	2657.711	2656.920	40		488	N	TI	I	2833.09	2832.26	10	19.	488	
TI	I	2657.977	2657.186	100	3.	488		TI	I	2835.58	2834.75	20	19.	488	
TI	I	2661.45	2660.66	10	4.	488		TI	I	2836.46	2835.63	20	19.	488	
TI	I	2662.756	2661.966	100	2.	488		TI	I	2836.92	2836.09	10	19.	488	
TI	I	2669.15	2668.36	10	4.	488		TI	I	2837.23	2836.40	10	19.	488	
TI	I	2670.066	2669.274	20	3.	488		TI	I	2837.43	2836.60	10	19.	488	
TI	I	2670.402	2669.610	150	2.	488		TI	I	2893.62	2892.77	30		488	N
TI	I	2676.88	2676.09	10	4.	488		TI	I	2906.500	2905.649	50		488	N
TI	I	2680.744	2679.949	200	2.	488		TI	I	2912.925	2912.072	400	23.	488	
TI	I	2685.608	2684.812	50		488	N	TI	I	2923.77	2922.92	20	22.	488	
TI	I	2685.94	2685.14	30	2.	488		TI	I	2929.175	2928.320	300	34.	488	
TI	I	2689.617	2688.820	100		488	N	TI	I	2934.382	2933.526	250	1.	488	
TI	I	2725.890	2725.084	100	32.	488		TI	I	2938.158	2937.301	250	1.	488	
TI	I	2728.222	2727.416	80	32.	488		TI	I	2942.854	2941.995	600	1.	488	
TI	I	2731.952	2731.145	40	31.	488		TI	I	2948.58	2947.72	30	21.	488	
TI	I	2732.400	2731.592	70	32.	488		TI	I	2949.115	2948.255	600	1.	488	
TI	I	2734.073	2733.265	300	32.	488		TI	I	2956.996	2956.133	700	1.	488	
TI	I	2734.37	2733.56	300	31.	488		TI	I	2957.659	2956.796	250	1.	488	
TI	I	2736.107	2735.298	100	32.	488		TI	I	2960.57	2959.71	30	28.	488	
TI	I	2736.422	2735.613	60	26.	488		TI	I	2960.84	2959.98	50	28.	488	
TI	I	2737.52	2736.71	20	31.	488		TI	I	2962.34	2961.48	20	28.	488	
TI	I	2740.614	2739.804	150	32.	488		TI	I	2966.096	2965.231	50	27.	488	
TI	I	2741.69	2740.88	20	31.	488		TI	I	2966.546	2965.681	80	27.	488	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
TI	I	2966.59	2965.72	150	27.	488		TI	I	3126.456	3125.553	20	192.	1015	
TI	I	2967.25	2966.38	10	28.	488		TI	I	3126.559	3125.656	20	192.	1015	
TI	I	2968.086	2967.220	250	1.	488		TI	I	3128.588	3127.684	80	180.	1015	
TI	I	2969.097	2968.231	40	29.	1015		TI	I	3129.544	3128.640	80	192.	1015	
TI	I	2970.24	2969.37	10	28.	488		TI	I	3129.544	3128.640	80	92.	1015	
TI	I	2971.251	2970.384	100	29.	1015		TI	I	3129.979	3129.075	70	192.	1015	
TI	I	2971.419	2970.552	40	27.	488		TI	I	3131.080	3130.175	80	180.	1015	
TI	I	2975.794	2974.926	40	27.	488		TI	I	3135.560	3134.654	10	91.	1015	
TI	I	2977.19	2976.32	20	20.	488		TI	I	3135.975	3135.069	80	180.	1015	
TI	I	2981.15	2980.28	0	27.	488		TI	I	3136.934	3136.028	20	91.	1015	
TI	I	2982.315	2981.448	20	29.	1015		TI	I	3138.256	3137.352	10	91.	1015	
TI	I	2984.174	2983.306	200	29.	1015		TI	I	3140.78	3139.87	100	180.	1015	
TI	I	2986.345	2985.477	30	29.	1015		TI	I	3142.443	3141.537	150	66.	1015	
TI	I	2990.90	2990.03	30	33.	488		TI	I	3142.578	3141.670	100	192.	1015	
TI	I	2991.35	2990.48	30	33.	488		TI	I	3144.07	3143.16	J	28.	1015	
TI	I	2991.85	2990.98	30	33.	488		TI	I	3144.258	3143.350	120	180.	1015	
TI	I	2992.66	2991.79	10	20.	488		TI	I	3146.424	3145.515	10	91.	1015	
TI	I	3001.741	3000.868	200	28.	1015		TI	I	3152.02	3151.11	J	28.	1015	
TI	I	3003.601	3002.728	30	29.	1015		TI	I	3161.00	3160.09	J	28.	1015	
TI	I	3008.362	3007.487	40		1015		TI	I	3173.648	3172.731	40	65.	1015	
TI	I	3011.30	3010.42	J	170.	1015		TI	I	3180.210	3179.291	30	65.	1015	
TI	I	3085.713	3084.819	40	93.	1015		TI	I	3187.369	3186.451	60	27.	1025	
TI	I	3091.033	3090.137	80	93.	1015		TI	I	3187.372	3186.451	600	27.	1015	
TI	I	3101.565	3100.666	120	92.	1015		TI	I	3191.720	3190.801	20	26.	1025	
TI	I	3101.565	3100.666	120	93.	1015		TI	I	3192.914	3191.994	80	27.	1025	
TI	I	3102.425	3101.526	40	181.	1015		TI	I	3192.916	3191.994	800	27.	1015	
TI	I	3102.67	3101.77	10	181.	1015		TI	I	3199.650	3198.726	10	191.	1015	
TI	I	3103.416	3102.517	30	181.	1015		TI	I	3200.270	3199.346	10	191.	1015	
TI	I	3106.120	3105.220	20	181.	1015		TI	I	3200.35	3199.43	10	191.	1015	
TI	I	3107.707	3106.806	80	92.	1015		TI	I	3200.837	3199.915	100	27.	1025	
TI	I	3108.369	3107.468	120	181.	1015		TI	I	3200.840	3199.915	1000	27.	1015	
TI	I	3112.185	3111.283	100	181.	1015		TI	I	3202.519	3201.594	50	90.	1015	
TI	I	3113.384	3112.482	80	92.	1015		TI	I	3204.51	3203.58	20	26.	1015	
TI	I	3114.995	3114.092	200	181.	1015		TI	I	3204.754	3203.828	150	27.	1015	
TI	I	3118.359	3117.455	60	92.	1015		TI	I	3205.796	3204.870	60	90.	1015	
TI	I	3118.803	3117.899	50	92.	1015		TI	I	3206.091	3205.168	20	26.	1015	
TI	I	3119.034	3118.130	150	181.	1015		TI	I	3206.771	3205.848	50	26.	1015	
TI	I	3120.629	3119.725	150	137.	1015		TI	I	3207.267	3206.344	50	179.	1015	
TI	I	3123.979	3123.074	150	67.	1015		TI	I	3207.749	3206.825	50	179.	1015	
TI	I	3124.672	3123.769	200	181.	1015		TI	I	3208.261	3207.337	50	90.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
TI	I	3208.821	3207.897	50	179.	1015		TI	I	3307.828	3306.879	100	190.	1015	
TI	I	3209.954	3209.030	40	179.	1015		TI	I	3309.341	3308.391	100	87.	1015	
TI	I	3211.99	3211.07	10	191.	1015		TI	I	3310.27	3309.32	J	122.	1015	
TI	I	3214.070	3213.145	80	191.	1015		TI	I	3310.451	3309.501	150	87.	1015	
TI	I	3214.070	3213.145	80	90.	1015		TI	I	3310.680	3309.730	60	190.	1015	
TI	I	3215.166	3214.240	120	27.	1015		TI	I	3313.641	3312.690	50	190.	1015	
TI	I	3217.129	3216.203	30	90.	1015		TI	I	3315.373	3314.422	100	87.	1015	
TI	I	3218.869	3217.942	80	179.	1015		TI	I	3315.474	3314.523	80	87.	1015	
TI	I	3219.610	3218.683	J	90.	1015		TI	I	3316.189	3315.237	20	190.	1015	
TI	I	3220.139	3219.212	80	179.	1015		TI	I	3319.315	3318.362	40	190.	1015	
TI	I	3222.079	3221.151	20	26.	1015		TI	I	3322.541	3321.588	80	87.	1015	
TI	I	3222.309	3221.381	100	179.	1015		TI	I	3324.614	3323.660	20	255.	1015	
TI	I	3223.669	3222.741	30	26.	1015		TI	I	3324.850	3323.896	20	255.	1015	
TI	I	3224.447	3223.519	100	179.	1015		TI	I	3325.56	3324.61	10	60.	1015	
TI	I	3227.057	3226.128	120	179.	1015		TI	I	3325.708	3324.754	40	190.	1015	
TI	I	3227.169	3226.240	10	27.	1015		TI	I	3326.110	3325.155	30	190.	1015	
TI	I	3229.113	3228.183	20	179.	1015		TI	I	3326.184	3325.229	30	190.	1015	
TI	I	3233.722	3232.791	30	179.	1015		TI	I	3326.320	3325.365	10	255.	1015	
TI	I	3236.88	3235.95	J	47.	1015		TI	I	3327.594	3326.639	20	87.	1015	
TI	I	3239.157	3238.224	40	179.	1015		TI	I	3329.281	3328.326	10	255.	1015	
TI	I	3241.77	3240.84	J	47.	1015		TI	I	3334.869	3333.912	20	25.	1015	
TI	I	3244.447	3243.513	30	179.	1015		TI	I	3335.31	3334.35	10	190.	1015	
TI	I	3244.737	3243.803	40	26.	1015		TI	I	3338.36	3337.40	10	190.	1015	
TI	I	3245.46	3244.53	J	47.	1015		TI	I	3340.50	3339.54	10	178.	1015	
TI	I	3249.538	3248.602	150	89.	1015		TI	I	3341.73	3340.77	10	190.	1015	
TI	I	3259.98	3259.04	10	123.	1015		TI	I	3342.513	3341.554	10	178.	1015	
TI	I	3260.36	3259.42	20	123.	1015		TI	I	3342.513	3341.554	10	60.	1015	
TI	I	3261.198	3260.259	30	89.	1015		TI	I	3342.836	3341.875	500	24.	1007	
TI	I	3263.57	3262.63	10	88.	1015		TI	I	3343.110	3342.151	60	23.	1015	
TI	I	3266.420	3265.480	20	123.	1015		TI	I	3343.667	3342.707	20	25.	1015	
TI	I	3268.35	3267.41	J	64.	1015		TI	I	3344.339	3343.379	J	178.	1015	
TI	I	3269.55	3268.61	10	88.	1015		TI	I	3345.58	3344.62	J	25.	1015	
TI	I	3271.504	3270.562	30	123.	1015		TI	I	3345.590	3344.630	J	178.	1015	
TI	I	3274.990	3274.047	50	123.	1015		TI	I	3345.891	3344.931	10	178.	1015	
TI	I	3279.866	3278.922	120	63.	1015		TI	I	3349.496	3348.535	50	25.	1015	
TI	I	3281.336	3280.391	20	88.	1015		TI	I	3351.510	3350.548	20	178.	1015	
TI	I	3289.54	3288.59	J	63.	1015		TI	I	3353.39	3352.43	J	169.	1015	
TI	I	3293.026	3292.078	200	62.	1015		TI	I	3353.899	3352.937	60	25.	1015	
TI	I	3298.63	3297.68	J	122.	1015		TI	I	3355.595	3354.631	600	24.	1007	
TI	I	3300.360	3299.413	100	61.	1015		TI	I	3357.159	3356.196	20	178.	1015	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	IY	MULTIPLY	REFERENCE	NOTES
TI	II	2348.18	2347.46	20	18.	488	TI	II	2582.50	2581.73	1		601
TI	II	2350.69	2349.97	30	18.	488	TI	II	2604.89	2604.11	2		601
TI	II	2351.39	2350.67	20	18.	488	TI	II	2631.0	2630.2			601
TI	II	2354.84	2354.12	30		601	TI	II	2633.73	2632.95			601
TI	II	2355.33	2354.61	10	18.	488	TI	II	2636.38	2635.60	5	29.	488
TI	II	2355.89	2355.17	20	18.	488	TI	II	2639.49	2638.70	10	29.	488
TI	II	2356.58	2355.86	10	18.	488	TI	II	2642.94	2642.15	20	29.	488
TI	II	2358.54	2357.82	20	18.	488	TI	II	2646.87	2646.08	50	29.	488
TI	II	2440.95	2440.21	50	21.	488	TI	II	2656.09	2655.30			601
TI	II	2443.41	2442.67	20	21.	488	TI	II	2696.77	2695.97	0		601
TI	II	2448.66	2447.92	20	21.	488	TI	II	2699.32	2698.52	30		488
TI	II	2451.18	2450.44	60	21.	488	TI	II	2707.85	2707.05	0		601
TI	II	2464.74	2464.00	10		601	TI	II	2714.50	2713.76	1	13.	488
TI	II	2469.89	2469.15	10		601	TI	II	2717.00	2716.20	4	13.	488
TI	II	2474.97	2474.22	20	2.	488	TI	II	2718.10?	2717.304	3	15.	488
TI	II	2477.96	2477.21	20	2.	488	TI	II	2720.19	2719.39	2	13.	488
TI	II	2479.39	2478.64	50	2.	488	TI	II	2726.60	2725.79	3	15.	488
TI	II	2479.52	2478.77	10		601	TI	II	2731.76	2730.95	6	23.	488
TI	II	2482.24	2481.49	10	10.	488	TI	II	2739.51	2738.70	3	23.	488
TI	II	2499.69	2498.94	20	10.	488	TI	II	2743.11	2742.30	8		601
TI	II	2511.65	2510.90	2	4.	488	TI	II	2747.51	2746.70	30	31.	488
TI	II	2518.204	2517.448	2	4.	488	TI	II	2752.51	2751.70	50	31.	488
TI	II	2518.82	2518.06	2		601	TI	II	2753.66	2752.85	4	33.	488
TI	II	2520.07	2519.31	0		601	TI	II	2758.43	2757.62	3	33.	488
TI	II	2520.55	2519.79	0	4.	488	TI	II	2759.16	2758.35	2	33.	488
TI	II	2525.413	2524.655	8	4.	488	TI	II	2759.74	2758.93	1	33.	488
TI	II	2526.378	2525.619	30	4.	488	TI	II	2762.105	2761.291	7	12.	488
TI	II	2530.50	2529.74	0	4.	488	TI	II	2763.03	2762.22	2	12.	488
TI	II	2532.026	2531.266	20	4.	488	TI	II	2763.73	2762.92	3	33.	488
TI	II	2535.401	2534.640	20	4.	488	TI	II	2764.71	2763.90	1	8.	488
TI	II	2536.643	2535.881	10	4.	488	TI	II	2765.09	2764.28	1	33.	488
TI	II	2547.64	2546.88	M		601	TI	II	2765.636	2764.821	10	12.	488
TI	II	2549.47	2548.71	M		601	TI	II	2766.46	2765.65	0	33.	488
TI	II	2556.753	2555.988	10	9.	488	TI	II	2769.02	2768.20	M	31.	488
TI	II	2565.26	2564.49	1		601	TI	II	2779.30	2778.48	2	28.	488
TI	II	2569.75	2568.98	1		601	TI	II	2781.37	2780.55	5	8.	488
TI	II	2571.806	2571.036	20	9.	488	TI	II	2783.12	2782.30	2	28.	488
TI	II	2573.418	2572.648	5		488	TI	II	2785.469	2784.648	3	8.	488
TI	II	2574.49	2573.72	0	9.	488	TI	II	2786.81	2785.99	6	28.	488
TI	II	2574.68	2573.91	M		601	TI	II	2788.82	2788.00	8	28.	488

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
II	II	2791.44	2790.62	3	28.	488		II	II	2878.260	2877.418	30	14.	488	
II	II	2801.48	2800.65	30	28.	488		II	II	2881.12	2880.28	3	20.	488	
II	II	2805.82	2805.00	40	25.	488		II	II	2884.943	2884.099	70	14.	488	
II	II	2807.231	2806.407	5	17.	488		II	II	2888.301	2887.456	2	14.	488	
II	II	2811.101	2810.276	50	25.	488		II	II	2889.47	2888.62	10		488	N
II	II	2812.88	2812.05	1		601		II	II	2889.769	2888.923	15	5.	488	
II	II	2815.44	2814.61	M		601		II	II	2891.44	2890.59	8		601	
II	II	2816.40	2815.57	2		601		II	II	2891.896	2891.050	15	5.	488	
II	II	2818.666	2817.838	60	25.	488		II	II	2896.66	2895.81	M		601	
II	II	2820.82	2819.99	8	25.	488		II	II	2902.79	2901.94	0		601	
II	II	2821.19	2820.36	4	7.	488		II	II	2907.54	2906.69	20		601	
II	II	2822.24	2821.41	8	24.	488		II	II	2908.99	2908.14	4		488	N
II	II	2828.05	2827.22	10	24.	488		II	II	2910.30	2909.45	1		601	
II	II	2828.981	2828.150	60	25.	488		II	II	2910.764	2909.912	7	1.	488	
II	II	2829.63	2828.80	30	24.	488		II	II	2911.61	2910.76	0	27.	488	
II	II	2829.70	2828.87	30	25.	488		II	II	2913.93	2913.08	1	1.	488	
II	II	2832.990	2832.158	20	7.	488		II	II	2914.19	2913.34	10		488	N
II	II	2834.97	2834.14	10	24.	488		II	II	2915.74	2914.89	10		488	N
II	II	2837.43	2836.60	15	24.	488		II	II	2916.94	2916.09	10		488	N
II	II	2840.53	2839.70	15	25.	488		II	II	2917.55	2916.70	1		601	
II	II	2842.749	2841.914	30	7.	488		II	II	2919.62	2918.77	2	30.	488	
II	II	2844.93	2844.09	2	24.	488		II	II	2921.64	2920.79	0		601	
II	II	2846.93	2846.09	15	24.	488		II	II	2924.50	2923.65	M		601	
II	II	2851.924	2851.087	20	16.	488		II	II	2924.86	2924.01	8		601	
II	II	2854.760	2853.922	10	7.	488		II	II	2927.60	2926.75	10	27.	488	
II	II	2856.33	2855.49	1	24.	488		II	II	2928.72	2927.87	2		601	
II	II	2857.08	2856.24	25	24.	488		II	II	2929.54	2928.69	15		601	
II	II	2857.455	2856.616	2	20#	488		II	II	2932.13	2931.27	40	30.	488	
II	II	2858.63	2857.79	15		601		II	II	2937.03	2936.17	30	26.	488	
II	II	2859.238	2858.399	8	6.	488		II	II	2939.55	2938.69	30	26.	488	
II	II	2861.63	2860.79	4		601		II	II	2942.25	2941.39	8		601	
II	II	2862.129	2861.291	3		488		II	II	2942.852	2941.993	50	26.	488	
II	II	2862.83	2861.99	20	16.	601		II	II	2943.98	2943.12	12	30.	488	
II	II	2863.18	2862.34	30	16.	488		II	II	2946.33	2945.47	50	26.	488	
II	II	2869.14	2868.30	0	24.	488		II	II	2952.96	2952.10	40	26.	488	
II	II	2869.572	2868.732	15	5.	488		II	II	2955.62	2954.76	60	34#	488	
II	II	2870.88	2870.04	25		488	N	II	II	2959.16	2958.30	20	26.	488	
II	II	2874.92	2874.08	2	14.	488		II	II	2959.84	2958.98	50	34.	488	
II	II	2876.23	2875.39	15		488	N	II	II	2978.67	2977.80	7		488	N
II	II	2876.63	2875.79	10		601		II	II	2980.068	2979.199	10	123.	1015	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
TI	II	2985.22	2984.35	M		28.	1015	TI	II	3098.524	3097.626	1		77.	1015
TI	II	2988.27	2987.40	1		28.	1015	TI	II	3102.42	3101.52	M		58.	1015
TI	II	2991.03	2990.16	10		123.	1015	TI	II	3103.875	3102.975	2		58.	1015
TI	II	2996.62	2995.75	5			601	TI	II	3104.704	3103.804	50		90.	1015
TI	II	2997.75	2996.88	M		28.	1015	TI	II	3105.493	3104.593	3		90.	1015
TI	II	3000.79	2999.92	M		28.	1015	TI	II	3105.984	3105.084	20		67.	1015
TI	II	3004.24	3003.37	M		28.	1015	TI	II	3107.135	3106.234	35		67.	1015
TI	II	3009.197	3008.322	2		85.	1015	TI	II	3109.828	3108.927	0		77.	1015
TI	II	3018.065	3017.187	50		85.	1015	TI	II	3110.82	3109.92	M		58.	1015
TI	II	3023.699	3022.820	15		126.	1015	TI	II	3110.997	3110.095	8		77.	1015
TI	II	3024.74	3023.86	12		126.	1015	TI	II	3111.522	3110.620	20		67.	1015
TI	II	3030.611	3029.730	35		85.	1015	TI	II	3112.952	3112.050	10		67.	1015
TI	II	3037.667	3036.784	1		78.	1015	TI	II	3115.991	3115.088	1		58.	1015
TI	II	3039.590	3038.706	6		85.	1015	TI	II	3118.573	3117.669	20		67.	1015
TI	II	3044.736	3043.851	5		78.	1015	TI	II	3119.728	3118.824	2		27.	1015
TI	II	3045.971	3045.085	5			1015	TI	II	3120.704	3119.800	15		67.	1015
TI	II	3047.571	3046.685	30		47.	1015	TI	II	3122.504	3121.599	1		4.	1015
TI	II	3049.653	3048.766	6		78.	1015	TI	II	3122.970	3122.065	2		58.	1015
TI	II	3057.626	3056.740	15		47.	1015	TI	II	3128.787	3127.883	10		121.	1015
TI	II	3058.281	3057.395	10		5.	1015	TI	II	3129.544	3128.640	10		121.	1015
TI	II	3058.977	3058.090	50		47.	1015	TI	II	3131.709	3130.804	15		4.	1015
TI	II	3060.628	3059.741	6		5.	1015	TI	II	3137.68	3136.77	0		27.	1015
TI	II	3060.628	3059.741	6		47.	1015	TI	II	3140.95	3140.04	M		27.	1015
TI	II	3064.168	3063.280	2		119.	1015	TI	II	3144.59	3143.68	M		37.	1015
TI	II	3064.390	3063.502	4		47.	1015	TI	II	3144.664	3143.756	10		4.	1015
TI	II	3067.109	3066.220	30		5.	1015	TI	II	3145.639	3144.730	1		111.	1015
TI	II	3067.243	3066.354	20		5.	1015	TI	II	3145.65	3144.74	M		10.	1015
TI	II	3067.403	3066.514	3		47.	1015	TI	II	3146.311	3145.402	0		10.	1015
TI	II	3072.132	3071.242	15		47.	1015	TI	II	3146.311	3145.402	0		111.	1015
TI	II	3072.998	3072.107	30		5.	1015	TI	II	3148.943	3148.033	12		4.	1015
TI	II	3073.43	3072.54	0		119.	1015	TI	II	3153.05	3152.14	M		27.	1015
TI	II	3073.862	3072.971	40		5.	1015	TI	II	3153.162	3152.251	15		10.	1015
TI	II	3076.117	3075.225	40		5.	1015	TI	II	3155.106	3154.195	12		10.	1015
TI	II	3079.538	3078.645	50		5.	1015	TI	II	3156.41	3155.50	M		27.	1015
TI	II	3082.468	3081.575	5		119.	1015	TI	II	3156.54	3155.63	M		37.	1015
TI	II	3088.922	3088.027	75		5.	1015	TI	II	3156.582	3155.670	12		10.	1015
TI	II	3090.297	3089.401	15		90.	1015	TI	II	3156.82	3155.91	M		121.	1015
TI	II	3090.947	3090.051	8		119.	1015	TI	II	3158.309	3157.397	2		4.	1015
TI	II	3097.322	3096.424	2		77.	1015	TI	II	3162.118	3161.205	25		10.	1015
TI	II	3098.084	3097.186	25		67.	1015	TI	II	3162.57	3161.66	M		27.	1015

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
II	II	3162.669	3161.755	30	10.	1015	II	II	3225.170	3224.241	35	84.	1015
II	II	3163.484	3162.570	35	10.	1015	II	II	3227.700	3226.771	2	3.	1015
II	II	3165.82	3164.91	8		1015	II	II	3229.29	3228.36	M	46.	1015
II	II	3166.15	3165.24	M	37.	1015	II	II	3229.535	3228.605	30	24.	1015
II	II	3169.435	3168.519	40	10.	1015	II	II	3230.123	3229.193	40	2.	1015
II	II	3175.72	3174.80	5		1015	II	II	3230.327	3229.397	35	36.	1015
II	II	3176.58	3175.66	2	120.	1015	II	II	3232.246	3231.315	4	9.	1015
II	II	3179.549	3178.630	3	120.	1015	II	II	3232.64	3231.71	M	46.	1015
II	II	3181.144	3180.225	2	120.	1015	II	II	3233.211	3232.280	30	36.	1015
II	II	3182.76	3181.84	8	122.	1015	II	II	3235.43	3234.50	M	46.	1015
II	II	3183.49	3182.57	6	122.	1015	II	II	3235.449	3234.517	75	2.	1015
II	II	3185.01	3184.09	2	3.	1015	II	II	3237.054	3236.122	20	24.	1015
II	II	3190.44	3189.52	5	120.	1015	II	II	3237.563	3236.573	70	2.	1015
II	II	3191.796	3190.874	30	26.	1015	II	II	3239.970	3239.037	60	2.	1015
II	II	3193.18	3192.26	2	25.	1015	II	II	3240.597	3239.664	30	24.	1015
II	II	3193.60	3192.68	4	120.	1015	II	II	3241.64	3240.71	1	9.	1015
II	II	3195.18	3194.26	5	120.	1015	II	II	3242.918	3241.984	60	2.	1015
II	II	3195.48	3194.56	8	120.	1015	II	II	3249.538	3248.602	50	66.	1015
II	II	3195.68	3194.76	6		1015	II	II	3249.64	3248.70	M	9.	1015
II	II	3196.640	3195.717	3	25.	1015	II	II	3250.306	3249.370	2	23.	1015
II	II	3196.918	3195.994	M	46.	1015	II	II	3252.848	3251.911	30	2.	1015
II	II	3198.442	3197.518	2	3.	1015	II	II	3253.851	3252.914	40	2.	1015
II	II	3203.460	3202.535	40	26.	1015	II	II	3253.88	3252.94	M	23.	1015
II	II	3204.361	3203.435	3	3.	1015	II	II	3255.187	3254.250	30	2.	1015
II	II	3206.56	3205.64	M	46.	1015	II	II	3261.198	3260.259	3	45.	1015
II	II	3206.913	3205.990	1	26.	1015	II	II	3262.535	3261.596	60	66.	1015
II	II	3209.531	3208.607	1	120.	1015	II	II	3262.535	3261.596	60	89.	1015
II	II	3213.63	3212.70	M	9.	1015	II	II	3264.626	3263.686	4	45.	1015
II	II	3214.070	3213.145	1	3.	1015	II	II	3267.37	3266.43	1	57.	1015
II	II	3214.52	3213.59	M	120.	1015	II	II	3270.71	3269.77	1	57.	1015
II	II	3215.07	3214.14	1	84.	1015	II	II	3272.594	3271.652	25	66.	1015
II	II	3215.676	3214.750	4	3.	1015	II	II	3273.022	3272.080	25	66.	1015
II	II	3217.81	3216.98	M	36.	1015	II	II	3276.236	3275.293	3	23.	1015
II	II	3217.983	3217.056	30	2.	1015	II	II	3277.718	3276.774	5	45.	1015
II	II	3219.19	3218.26	M	46.	1015	II	II	3277.942	3276.998	0	8.	1015
II	II	3219.197	3218.270	25	84.	1015	II	II	3279.234	3278.290	30	66.	1015
II	II	3219.37	3218.44	M	46.	1015	II	II	3279.866	3278.922	35	23.	1015
II	II	3221.395	3220.467	1	9.	1015	II	II	3280.91	3279.97	M	57.	1015
II	II	3222.69	3221.76	M	46.	1015	II	II	3280.940	3279.995	4	35.	1015
II	II	3223.771	3222.843	35	2.	1015	II	II	3283.274	3282.329	25	66.	1015

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
II	II	3284.09	3283.14	M	57.	1015	II	II	3352.63	3351.67	1	124.	1015
II	II	3287.703	3286.756	0	89.	1015	II	II	3353.033	3352.071	5	54.	1015
II	II	3288.604	3287.657	40	89.	1015	II	II	3355.50	3354.54	M	64.	1015
II	II	3289.089	3288.142	0	8.	1015	II	II	3361.12	3360.16	M	54.	1015
II	II	3289.375	3288.428	5	66.	1015	II	II	3362.03	3361.07	M	64.	1015
II	II	3289.522	3288.575	5	66.	1015	II	II	3362.178	3361.213	125	1.	1015
II	II	3294.43	3293.48	M	57.	1015	II	II	3363.618	3362.653	1	64.	1015
II	II	3299.16	3298.21	1	44.	1015	II	II	3365.27	3364.30	M	43.	1015
II	II	3300.39	3299.44	M	8.	1015	II	II	3365.83	3364.86	1	601	
II	II	3302.66	3301.71	2	44.	1015	II	II	3367.142	3366.176	8	54.	1015
II	II	3303.044	3302.096	0	8.	1015	II	II	3370.179	3369.212	2	64.	1015
II	II	3307.002	3306.053	M	44.	1015	II	II	3370.64	3369.67	0	124.	1015
II	II	3308.666	3307.717	0	8.	1015	II	II	3373.176	3372.208	10	16.	1015
II	II	3309.756	3308.806	8	7.	1015	II	II	3373.768	3372.800	100	1.	1015
II	II	3310.48	3309.53	M	44.	1015	II	II	3375.321	3374.352	8	54.	1015
II	II	3313.85	3312.90	M	56.	1015	II	II	3380.900	3379.930	1	64.	1015
II	II	3316.276	3315.324	10	65.	1015	II	II	3381.248	3380.278	30	1.	1015
II	II	3318.976	3318.024	10	7.	1015	II	II	3384.54	3383.57	M	63.	1015
II	II	3320.036	3319.083	1	8.	1015	II	II	3384.732	3383.761	125	1.	1015
II	II	3322.654	3321.700	25	65.	1015	II	II	3388.806	3387.834	50	1.	1015
II	II	3323.890	3322.936	75	7.	1015	II	II	3389.728	3388.755	8	53.	1015
II	II	3323.93	3322.98	M	44.	1015	II	II	3395.34	3394.37	M	63.	1015
II	II	3324.34	3323.39	M	43.	1015	II	II	3395.545	3394.574	40	1.	1015
II	II	3327.63	3326.68	M	56.	1015	II	II	3403.395	3402.422	8	53.	1015
II	II	3327.717	3326.762	20	7.	1015	II	II	3405.94	3404.97	1	63.	1015
II	II	3330.411	3329.455	70	7.	1015	II	II	3408.180	3407.205	3	1.	1015
II	II	3333.068	3332.111	30	65.	1015	II	II	3410.785	3409.809	4	1.	1015
II	II	3336.149	3335.192	40	7.	1015	II	II	3412.66	3411.68	M	63.	1015
II	II	3337.956	3336.998	M	43.	1015	II	II	3415.00	3414.02	0	127.	1015
II	II	3338.81	3337.85	2	55.	1015	II	II	3417.935	3416.957	2	53.	1015
II	II	3341.303	3340.344	35	7.	1015	II	II	3423.640	3422.661	1	63.	1015
II	II	3342.834	3341.875	100	16.	1015	II	II	3445.293	3444.306	15	6.	1007
II	II	3342.932	3341.971	J	1007		II	II	3453.41	3452.42	4	601	
II	II	3344.730	3343.770	10	7.	1015	II	II	3457.375	3456.384	5	1007	
II	II	3347.685	3346.724	15	7.	1015	II	II	3457.39	3456.40	20	601	
II	II	3347.87	3346.91	M	43.	1015	II	II	3460.00	3459.01	0	601	
II	II	3349.805	3348.844	10	7.	1015	II	II	3462.490	3461.498	20	6.	1007
II	II	3349.996	3349.035	75	16.	1015	II	II	3466.57	3465.58	3	601	
II	II	3350.360	3349.399	125	1.	1015	II	II	3477.98	3476.99	00	601	
II	II	3351.510	3350.548	1	43.	1015	II	II	3478.176	3477.181	15	6.	1007

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
TI	III	2581.228	2580.456	360	6.	227		TI	III	3246.526	3245.589	15		227	
TI	III	2590.73	2589.96	25		227		TI	III	3247.565	3246.628	80		227	
TI	III	2591.61	2590.84	25		227		TI	III	3255.820	3254.881	7		227	
TI	III	2692.957	2692.158	160		227		TI	III	3264.367	3263.426	3		227	
TI	III	2702.757	2701.956	230		227		TI	III	3277.058	3276.114	3		227	
TI	III	2719.45	2718.64	1		227		TI	III	3279.25	3278.31	G		227	
TI	III	2774.54	2773.72	25		227		TI	III	3279.698	3278.754	7		227	
TI	III	2786.83	2786.01	1		227		TI	III	3296.713	3295.764	15		227	
TI	III	2799.54	2798.72	40		227		TI	III	3311.857	3310.904	60		227	
TI	III	2799.735	2798.910	100		227		TI	III	3313.961	3313.008	80		227	
TI	III	2803.77	2802.94	1		227		TI	III	3316.696	3315.742	3		227	
TI	III	2803.98	2803.15	1		227		TI	III	3321.898	3320.943	80		227	
TI	III	2808.03	2807.20	1		227		TI	III	3332.003	3331.105	60		227	
TI	III	2813.40	2812.57	1		227		TI	III	3333.210	3332.252	80		227	
TI	III	2819.822	2818.992	100		227		TI	III	3334.416	3333.457	15		227	
TI	III	2821.61	2820.78	3		227		TI	III	3341.163	3340.202	80		227	
TI	III	2822.52	2821.69	1		227		TI	III	3347.144	3346.182	130		227	
TI	III	2825.28	2824.45	15		227		TI	III	3347.78	3346.82	130		227	
TI	III	2826.74	2825.90	1		227		TI	III	3355.67	3354.71	230		227	
TI	III	2848.09	2847.26	3		227		TI	III	3358.887	3357.922	60		227	
TI	III	2888.99	2888.14	3		227		TI	III	3359.066	3358.101	5		227	
TI	III	2890.35	2889.50	7		227		TI	III	3371.593	3370.625	80		227	
TI	III	2931.347	2930.490	7		227		TI	III	3372.591	3371.623	130		227	
TI	III	2985.617	2984.747	775	8.	227	F	TI	III	3372.940	3371.971	15		227	
TI	III	3009.3	3008.4			227		TI	III	3376.976	3376.007	3		227	
TI	III	3041.398	3040.513	1		227		TI	III	3378.656	3377.686	25		227	
TI	III	3067.46	3066.51	G		227		TI	III	3378.866	3377.896	7		227	
TI	III	3151.229	3150.317	7		227		TI	III	3383.685	3382.714	3		227	
TI	III	3155.431	3154.518	15		227		TI	III	3391.195	3390.222	7		227	
TI	III	3168.745	3167.828	25		227		TI	III	3393.919	3392.945	40		227	
TI	III	3185.760	3184.839	130		227		TI	III	3396.362	3395.387	3		227	
TI	III	3191.502	3190.580	15		227		TI	III	3396.956	3395.981	15		227	
TI	III	3194.694	3193.771	40		227		TI	III	3397.407	3396.432	40		227	
TI	III	3201.814	3200.888	15		227		TI	III	3398.210	3397.235	40		227	
TI	III	3228.877	3227.945	25		227		TI	III	3401.867	3400.891	7		227	
TI	III	3229.819	3228.887	40		227		TI	III	3405.439	3404.462	80		227	
TI	III	3230.979	3230.047	25		227		TI	III	3412.382	3411.404	1		227	
TI	III	3236.216	3235.282	25		227		TI	III	3418.601	3417.621	130		227	
TI	III	3240.71	3239.77	15		227		TI	III	3422.142	3421.161	3		227	
TI	III	3241.65	3240.71	3		227		TI	III	3488.667	3487.669	15		227	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	I	2069.47	2068.81	5		489		V	I	2093.11	2092.44	60	48.	489	
V	I	2072.82	2072.16	0		489		V	I	2094.37	2093.70	1		489	
V	I	2072.96	2072.30	6		489		V	I	2094.82	2094.15	8		489	
V	I	2073.42	2072.75	10		489		V	I	2095.38	2094.71	40	49.	489	
V	I	2073.89	2073.23	2		489		V	I	2095.78	2095.11	2		489	
V	I	2074.25	2073.58	2		489		V	I	2095.96	2095.29	2		489	
V	I	2074.56	2073.89	1		489		V	I	2096.44	2095.77	25	49.	489	
V	I	2077.08	2076.41	8		489		V	I	2096.86	2096.19	20	47.	489	
V	I	2077.45	2076.78	0		489		V	I	2097.04	2096.37	20	47.	489	
V	I	2077.66	2077.00	5		489		V	I	2097.21	2096.54	00		489	
V	I	2077.83	2077.16	15	63.	489		V	I	2097.39	2096.72	15	49.	489	
V	I	2078.41	2077.75	00		489		V	I	2097.67	2097.00	8		489	
V	I	2078.75	2078.12	0		489		V	I	2098.03	2097.36	30	48.	489	
V	I	2080.23	2079.56	15		489		V	I	2099.17	2098.50	40	47.	489	
V	I	2080.54	2079.87	1		489		V	I	2100.22	2099.55	3		489	
V	I	2081.13	2080.46	2		489		V	I	2101.18	2100.51	25	48.	489	
V	I	2081.36	2080.70	2		489		V	I	2101.44	2100.77	25	48.	489	
V	I	2081.53	2080.86	2		489		V	I	2102.18	2101.51	00		489	
V	I	2082.01	2081.35	2		489		V	I	2102.90	2102.23	15	47.	489	
V	I	2082.37	2081.70	0		489		V	I	2103.25	2102.58	15	42.	489	
V	I	2083.19	2082.52	30	48.	489		V	I	2103.71	2103.04	8		489	
V	I	2083.51	2082.84	12		489		V	I	2104.74	2104.07	3		489	
V	I	2084.31	2083.65	00		489		V	I	2105.24	2104.57	15	47.	489	
V	I	2084.79	2084.12	10	49.	489		V	I	2105.51	2104.84	20	49.	489	
V	I	2086.23	2085.56	10	49.	489		V	I	2107.00	2106.33	15	47.	489	
V	I	2086.58	2085.91	20	49.	489		V	I	2109.64	2108.97	8		489	
V	I	2087.00	2086.33	20	48.	489		V	I	2111.18	2110.51	1	47.	489	
V	I	2087.24	2086.57	15	49.	489		V	I	2112.05	2111.38	5		489	
V	I	2088.14	2087.47	8		489		V	I	2114.19	2113.52	0		489	
V	I	2088.29	2087.62	10	49.	489		V	I	2115.49	2114.82	0	47.	489	
V	I	2088.64	2087.97	1		489		V	I	2118.15	2117.48	20	42.	489	
V	I	2089.23	2088.56	40	49.	489		V	I	2124.82	2124.15	12	42.	489	
V	I	2089.80	2089.13	2		489		V	I	2126.51	2125.84	20	42.	489	
V	I	2090.61	2089.94	20		489		V	I	2127.42	2126.74	5		489	
V	I	2091.21	2090.54	5		489		V	I	2127.85	2127.17	5		489	
V	I	2091.35	2090.68	30	48.	489		V	I	2132.71	2132.03	3		489	
V	I	2091.63	2090.96	10	49.	489		V	I	2133.58	2132.91	8		489	
V	I	2091.96	2091.29	20	48.	489		V	I	2134.58	2133.90	0		489	
V	I	2092.58	2091.91	4		489		V	I	2135.86	2135.18	0		489	
V	I	2092.97	2092.30	10	48.	489		V	I	2136.22	2135.54	1		489	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	I	2136.95	2136.27	1		489		V	I	2205.620	2204.930	12	43.	1000	
V	I	2138.39	2137.71	2		489		V	I	2208.667	2207.976	3		1000	
V	I	2139.30	2138.62	10	63.	489		V	I	2211.569	2210.878	5		1000	
V	I	2140.12	2139.45	0		489		V	I	2212.041	2211.350	3	43.	1000	
V	I	2141.01	2140.33	1		489		V	I	2214.384	2213.692	10	40.	1000	
V	I	2143.13	2142.45	0		489		V	I	2216.938	2216.245	4	39.	1000	
V	I	2144.81	2144.13	5		489		V	I	2217.358	2216.666	10		1000	
V	I	2145.88	2145.20	3		489		V	I	2218.931	2218.238	25	39.	1000	
V	I	2146.96	2146.28	6		489		V	I	2220.345	2219.652	3	41.	1000	
V	I	2147.32	2146.64	10	42.	489		V	I	2221.143	2220.450	3	40.	1000	
V	I	2148.26	2147.58	5		1000		V	I	2223.528	2222.834	15	38.	1000	
V	I	2158.48	2157.80	5		489		V	I	2223.708	2223.014	20	39.	1000	
V	I	2158.80	2158.12	15	42.	489		V	I	2225.713	2225.029	8	39.	1000	
V	I	2165.22	2164.54	3		489		V	I	2226.116	2225.422	30	38.	1000	
V	I	2165.56	2164.88	15	42.	489		V	I	2226.481	2225.787	10	39.	1000	
V	I	2170.53	2169.85	8		489		V	I	2228.093	2227.398	3		1000	
V	I	2171.43	2170.74	60	46.	489		V	I	2229.530	2228.835	15	41.	1000	
V	I	2173.44	2172.75	7		489		V	I	2230.429	2229.734	25	39.	1000	
V	I	2173.83	2173.15	80	46.	1000		V	I	2231.057	2230.362	20	38.	1000	
V	I	2177.68	2177.00	100	46.	1000		V	I	2232.107	2231.412	30	42.	489	
V	I	2177.92	2177.24	10	46.	1000		V	I	2232.948	2232.252	8	39.	1000	
V	I	2182.66	2181.97	20	46.	1000		V	I	2235.376	2234.680	10	38.	1000	
V	I	2182.91	2182.22	120	46.	1000		V	I	2237.924	2237.228	50	39.	1000	
V	I	2185.22	2184.53	2		1000		V	I	2240.999	2240.302	2		1000	
V	I	2188.08	2187.39	10	45.	1000		V	I	2241.911	2241.213	7	39.	1000	
V	I	2188.64	2187.95	15	46.	1000		V	I	2242.544	2241.846	40	38.	1000	
V	I	2188.75	2188.06	3	43.	1000		V	I	2243.312	2242.614	5		1000	
V	I	2190.37	2189.68	2		1000		V	I	2243.956	2243.258	6		1000	
V	I	2190.64	2189.95	6	43.	1000		V	I	2244.440	2243.742	8	37.	1000	
V	I	2191.79	2191.10	30	45.	1000		V	I	2246.454	2245.756	30	37.	1000	
V	I	2192.34	2191.65	3	45.	1000		V	I	2246.903	2246.204	1		1000	
V	I	2194.16	2193.47	6		1000		V	I	2248.219	2247.520	9	37.	1000	
V	I	2194.51	2193.82	5	43.	1000		V	I	2251.371	2250.670	30	37.	1000	
V	I	2195.34	2194.65	10	43.	1000		V	I	2253.381	2252.681	5	37.	1000	
V	I	2196.98	2196.29	5	44.	1000		V	I	2257.669	2256.968	50	37.	1000	
V	I	2197.09	2196.40	40	45.	1000		V	I	2259.506	2258.805	9		1000	
V	I	2197.25	2196.56	2		489		V	I	2263.87	2263.17	1		1000	
V	I	2200.863	2200.174	15	43.	1000		V	I	2265.09	2264.39	30	37.	1000	
V	I	2203.413	2202.724	60	45.	1000		V	I	2272.753	2272.048	4	35.	1000	
V	I	2204.348	2203.658	4	43.	1000		V	I	2276.180	2275.475	3	93.	1000	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	I	2277.366	2276.661	3	36.	1000		V	I	2347.746	2347.026	10	31.	1000	
V	I	2277.594	2276.889	6	35.	1000		V	I	2356.163	2355.441	1		1000	
V	I	2279.858	2279.152	4	35.	1000		V	I	2370.72	2370.00	1		1000	
V	I	2280.63	2279.92	4		1000		V	I	2373.16	2372.43	1		1000	
V	I	2284.089	2283.382	10	35.	1000		V	I	2377.809	2377.083	3	89.	1000	
V	I	2285.200	2284.494	20	93.	1000		V	I	2378.989	2378.262	4		1000	
V	I	2285.689	2284.982	3	93.	1000		V	I	2380.905	2380.178	5	28.	1000	
V	I	2287.288	2286.581	8	35.	1000		V	I	2380.993	2380.266	8	28.	1000	
V	I	2290.971	2290.263	2		1000		V	I	2383.766	2383.038	3	29.	1000	
V	I	2292.235	2291.527	10	35.	1000		V	I	2385.014	2384.286	20	28.	1000	
V	I	2293.952	2293.243	2		1000		V	I	2385.37	2384.64	5	28.	1000	
V	I	2296.123	2295.414	4	33.	1000		V	I	2385.87	2385.14	2		1000	
V	I	2300.047	2299.337	5		1000		V	I	2387.137	2386.409	20	60.	1000	
V	I	2300.253	2299.544	3	34.	1000		V	I	2387.685	2386.956	40	89.	1000	
V	I	2303.241	2302.531	4	32.	1000		V	I	2388.203	2387.475	5	27.	1000	
V	I	2303.58	2302.87	1		1000		V	I	2388.509	2387.780	8		1000	
V	I	2305.059	2304.349	4		1000		V	I	2388.813	2388.084	35	28.	1000	
V	I	2308.37	2307.66	1		1000		V	I	2389.639	2388.910	40	89.	1000	
V	I	2308.998	2308.287	15	32.	1000		V	I	2391.503	2390.774	30	28.	1000	
V	I	2310.892	2310.180	20	32.	1000		V	I	2391.597	2390.868	4	29.	1000	
V	I	2311.670	2310.958	5		1000		V	I	2391.997	2391.268	30	60.	1000	
V	I	2312.177	2311.465	30	32.	1000		V	I	2392.73	2392.00	1		1000	
V	I	2313.122	2312.410	8	32.	1000		V	I	2393.628	2392.898	40	60.	1000	
V	I	2313.244	2312.531	10	95.	1000		V	I	2394.882	2394.152	2		1000	
V	I	2315.404	2314.691	20	90.	1000		V	I	2395.000	2394.270	10	62.	1000	
V	I	2316.347	2315.634	30	32.	1000		V	I	2395.835	2395.104	30	60.	1000	
V	I	2317.464	2316.751	25	90.	1000		V	I	2396.159	2395.429	10	60.	1000	
V	I	2320.870	2320.156	25	32.	1000		V	I	2396.819	2396.089	1		1000	
V	I	2321.786	2321.072	5		1000		V	I	2397.223	2396.492	15	60.	1000	
V	I	2322.810	2322.096	15	31.	1000		V	I	2397.436	2396.706	8	27.	1000	
V	I	2324.904	2324.189	10	95.	1000		V	I	2398.226	2397.496	4	29.	1000	
V	I	2325.062	2324.347	6	31.	1000		V	I	2398.506	2397.775	40	28.	1000	
V	I	2325.463	2324.748	40	32.	1000		V	I	2398.865	2398.134	20	27.	1000	
V	I	2326.588	2325.873	30	31.	1000		V	I	2399.008	2398.277	20	30.	1000	
V	I	2328.686	2327.970	10	31.	1000		V	I	2399.428	2398.697	10	61.	1000	
V	I	2330.245	2329.529	30	31.	1000		V	I	2399.608	2398.877	4	89.	1000	
V	I	2334.05	2333.33	20	31.	1000		V	I	2400.685	2399.954	50	26.	1000	
V	I	2335.151	2334.434	40	31.	1000		V	I	2402.181	2401.450	3		1000	
V	I	2340.391	2339.673	20	31.	1000		V	I	2402.287	2401.555	1		1000	
V	I	2341.197	2340.479	50	31.	1000		V	I	2402.633	2401.901	60	26.	1000	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	I	2403.761	2403.029	10	60.	1000		V	I	2456.15	2455.41	2		489	
V	I	2404.094	2403.362	5	60.	1000		V	I	2465.698	2464.953	2		1000	
V	I	2405.277	2404.544	5		489		V	I	2466.410	2465.664	10		1000	
V	I	2405.977	2405.245	10	61.	1000		V	I	2468.884	2468.138	3		1000	
V	I	2406.226	2405.494	8		1000		V	I	2472.190	2471.443	10	20.	1000	
V	I	2406.465	2405.733	6	60.	1000		V	I	2474.274	2473.527	6		1000	
V	I	2407.481	2406.748	50	26.	1000		V	I	2474.400	2473.652	5	59.	1000	
V	I	2408.122	2407.389	2		1000		V	I	2475.926	2475.178	10		1000	
V	I	2408.250	2407.517	5		489		V	I	2477.258	2476.510	8	59.	1000	
V	I	2408.633	2407.900	40	26.	1000		V	I	2479.72	2478.97	5	59.	1000	
V	I	2410.455	2409.721	7		1000		V	I	2481.355	2480.606	30	59.	1000	
V	I	2411.502	2410.768	2		1000		V	I	2481.86	2481.11	10	97.	1000	
V	I	2412.324	2411.590	5		1000		V	I	2482.03	2481.28	3		1000	
V	I	2413.420	2412.686	80	26.	1000		V	I	2482.865	2482.115	20	59.	1000	
V	I	2413.54	2412.81	1		489		V	I	2483.461	2482.711	15	81.	1000	
V	I	2413.730	2413.031	60	23.	1000		V	I	2483.614	2482.864	2		1000	
V	I	2416.061	2415.326	110	23.	1000		V	I	2484.386	2483.636	7		1000	
V	I	2417.483	2416.748	150	26.	1000		V	I	2488.278	2487.528	10	21.	1000	
V	I	2418.086	2417.351	100	23.	1000		V	I	2488.954	2488.203	5	22.	1000	
V	I	2419.473	2418.738	15	26.	1000		V	I	2489.488	2488.737	4	59.	1000	
V	I	2420.851	2420.115	100	26.	1000		V	I	2489.88	2489.13	4	59.	1000	
V	I	2420.957	2420.221	8		1000		V	I	2492.567	2491.815	2		1000	
V	I	2421.350	2420.614	3	24.	1000		V	I	2496.540	2495.787	20	22.	1000	
V	I	2421.794	2421.058	120	23.	1000		V	I	2497.852	2497.099	2		1000	
V	I	2422.712	2421.976	140	23.	1000		V	I	2498.408	2497.655	6	58.	1000	
V	I	2424.107	2423.370	40	23.	1000		V	I	2498.777	2498.024	10		1000	
V	I	2426.863	2426.126	15	26.	1000		V	I	2498.985	2498.232	20	20.	1000	
V	I	2428.472	2427.735	20	25.	1000		V	I	2499.848	2499.094	15	21.	1000	
V	I	2429.007	2428.269	100	23.	1000		V	I	2499.997	2499.244	12	17.	1000	
V	I	2432.306	2431.568	10	24.	1000		V	I	2500.531	2499.778	2		1000	
V	I	2432.678	2431.940	20	25.	1000		V	I	2500.713	2499.959	8	17.	1000	
V	I	2432.752	2432.014	25	23.	1000		V	I	2501.136	2500.382	5	18.	1000	
V	I	2435.257	2435.518	100	23.	1000		V	I	2502.362	2501.608	60	19.	1000	
V	I	2439.842	2439.102	50	24.	1000		V	I	2504.054	2503.300	50	17.	1000	
V	I	2442.092	2441.352	15	25.	1000		V	I	2504.667	2503.912	2		1000	
V	I	2442.632	2441.892	30	23.	1000		V	I	2505.137	2504.382	1		1000	
V	I	2445.965	2445.224	3	24.	1000		V	I	2506.295	2505.540	15	22.	1000	
V	I	2446.891	2446.150	3		489		V	I	2507.237	2506.482	6	18.	1000	
V	I	2450.52	2449.78	1		489		V	I	2507.657	2506.902	150	17.	1000	
V	I	2455.53	2454.79	1		489		V	I	2508.532	2507.777	100	19.	1000	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	2509.578	2508.822	5	16.	1000		V	I	2556.782	2556.016	9	14.	1000	
V	I	2510.94	2510.18	1		1000		V	I	2557.581	2556.815	6	14.	1000	
V	I	2510.998	2510.242	8	19.	1000		V	I	2559.660	2558.893	15	15.	1000	
V	I	2511.938	2511.182	20		1000		V	I	2560.58	2559.81	2		489	
V	I	2512.398	2511.642	80	17.	1000		V	I	2562.893	2562.125	60	15.	1000	
V	I	2512.697	2511.940	100	17.	1000		V	I	2564.996	2564.228	20	100.	1000	
V	I	2515.079	2514.322	15		1000		V	I	2565.116	2564.348	4		1000	
V	I	2515.17	2514.41	10	80.	1000		V	I	2565.585	2564.817	40	100.	1000	
V	I	2515.902	2515.145	30	18.	1000		V	I	2569.145	2568.376	30		1000	
V	I	2516.406	2515.649	6		1000		V	I	2571.038	2570.268	4		1000	
V	I	2517.900	2517.142	80	19.	1000		V	I	2574.791	2574.020	50	15.	1000	
V	I	2518.257	2517.500	8	16.	1000		V	I	2575.637	2574.866	3		1000	
V	I	2520.380	2519.622	100	17.	1000		V	I	2578.063	2577.292	20	15.	1000	
V	I	2521.07	2520.31	10		1000		V	I	2587.016	2586.242	5		1000	
V	I	2522.270	2521.512	6		1000		V	I	2598.51	2597.73	1		489	
V	I	2522.373	2521.615	3		1000		V	I	2600.79	2600.01	2		1000	
V	I	2522.783	2522.024	1		1000		V	I	2601.575	2600.798	5	73.	1000	
V	I	2524.264	2523.505	5		1000		V	I	2603.5	2602.7	1		1000	
V	I	2526.973	2526.213	100	17.	1000		V	I	2604.709	2603.932	1		1000	
V	I	2530.934	2530.174	80	19.	1000		V	I	2605.072	2604.294	5	73.	1000	
V	I	2531.96	2531.20	4		1000		V	I	2605.862	2605.084	4	73.	1000	
V	I	2532.539	2531.778	3		1000		V	I	2607.90	2607.12	7		1000	
V	I	2533.041	2532.280	5		1000		V	I	2608.531	2607.752	10		1000	
V	I	2534.561	2533.800	10		1000		V	I	2611.670	2610.891	6	73.	1000	
V	I	2534.967	2534.206	3	19.	1000		V	I	2611.810	2611.031	1		1000	
V	I	2535.586	2534.825	15	87.	1000		V	I	2612.034	2611.255	8	73.	1000	
V	I	2536.203	2535.441	2		489		V	I	2612.53	2611.75	1		1000	
V	I	2536.597	2535.835	1		489		V	I	2614.63	2613.85	2		489	
V	I	2537.694	2536.932	8		1000		V	I	2615.68	2614.90	2		489	
V	I	2542.528	2541.765	7		1000		V	I	2619.689	2618.908	5	57.	1000	
V	I	2544.487	2543.723	20	15.	1000		V	I	2621.065	2620.284	20	73.	1000	
V	I	2546.682	2545.981	30	15.	1000		V	I	2629.877	2629.094	5		1000	
V	I	2547.837	2547.073	6	14.	1000		V	I	2633.084	2632.300	2		1000	
V	I	2548.597	2547.832	1		1000		V	I	2633.182	2632.398	2		1000	
V	I	2550.38	2549.62	3		489		V	I	2634.372	2633.588	4	13.	1000	
V	I	2550.599	2549.834	5		489		V	I	2635.648	2634.864	8		1000	
V	I	2550.730	2549.965	12	15.	1000		V	I	2638.007	2637.222	20		1000	
V	I	2551.16	2550.40	1		489		V	I	2641.053	2640.267	7		1000	
V	I	2553.414	2552.648	50	15.	1000		V	I	2641.470	2640.684	6		1000	
V	I	2555.622	2554.856	15	15.	1000		V	I	2643.076	2642.289	4	13.	1000	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	2643.93	2643.14	5	13.	1000		V	I	2688.205	2687.408	5		1000	
V	I	2643.98	2643.19	5		1000		V	I	2689.35	2688.55	1		1000	
V	I	2645.477	2644.690	1		1000		V	I	2689.516	2688.719	60	70.	1000	
V	I	2646.043	2645.256	10	13.	1000		V	I	2689.739	2688.942	4	71.	1000	
V	I	2646.130	2645.343	5		1000		V	I	2689.911	2689.114	3	70.	1000	
V	I	2646.777	2645.990	2		1000		V	I	2690.147	2689.350	2		1000	
V	I	2648.497	2647.710	40	13.	1000		V	I	2690.863	2690.065	2		489	
V	I	2649.679	2648.891	6		1000		V	I	2693.80	2693.00	2		1000	
V	I	2651.396	2650.608	3		1000		V	I	2694.716	2693.918	6	70.	1000	
V	I	2652.685	2651.896	50	13.	1000		V	I	2694.901	2694.102	3		1000	
V	I	2653.708	2652.919	20	99.	1000		V	I	2696.033	2695.235	4	12.	1000	
V	I	2654.613	2653.824	25	99.	1000		V	I	2697.021	2696.222	5		1000	
V	I	2654.794	2654.005	2		1000		V	I	2697.175	2696.376	1		1000	
V	I	2657.014	2656.224	60	13.	1000		V	I	2697.559	2696.760	6	70.	1000	
V	I	2657.34	2656.55	10		1000		V	I	2697.795	2696.996	40	86.	1000	
V	I	2658.498	2657.708	5	11.	1000		V	I	2698.543	2697.744	50	86.	1000	
V	I	2662.215	2661.424	70	13.	1000		V	I	2699.523	2698.724	40	79.	1000	
V	I	2666.750	2665.958	20	12.	1000		V	I	2699.92	2699.12	20	79.	1000	
V	I	2669.687	2668.894	3	11.	1000		V	I	2700.846	2700.046	4		1000	
V	I	2671.711	2670.918	7	11.	1000		V	I	2701.306	2700.506	1		1000	
V	I	2672.462	2671.669	10	12.	1000		V	I	2702.066	2701.266	7		1000	
V	I	2676.547	2675.753	8	12.	1000		V	I	2704.705	2703.904	1		1000	
V	I	2676.771	2675.977	4	72.	1000		V	I	2708.390	2707.589	3	10.	1000	
V	I	2677.430	2676.636	3	72.	1000		V	I	2709.026	2708.224	2		489	
V	I	2677.911	2677.117	4	10.	1000		V	I	2711.273	2710.471	2		489	
V	I	2678.266	2677.472	1		1000		V	I	2712.677	2711.874	1		489	
V	I	2679.469	2678.674	5	12.	1000		V	I	2713.020	2712.217	4	86.	1000	
V	I	2679.673	2678.878	10	79.	1000		V	I	2715.828	2715.025	7		1000	
V	I	2680.502	2679.707	5	79.	1000		V	I	2717.492	2716.689	3		1000	
V	I	2681.734	2680.939	2		1000		V	I	2718.236	2717.433	3	9.	1000	
V	I	2681.97	2681.17	2		1000		V	I	2721.944	2721.139	20		1000	
V	I	2683.477	2682.682	1		1000		V	I	2723.365	2722.560	60	85.	1000	
V	I	2683.888	2683.092	80	72.	1000		V	I	2724.730	2723.925	2		1000	
V	I	2685.814	2685.018	5	12.	1000		V	I	2725.867	2725.062	4	8.	1000	
V	I	2685.94	2685.14	15	79.	1000		V	I	2727.930	2727.124	1		1000	
V	I	2686.311	2685.515	4	79.	1000		V	I	2728.246	2727.440	1		1000	
V	I	2686.640	2685.843	4	72.	1000		V	I	2729.927	2729.120	2		1000	
V	I	2687.153	2686.356	9	79.	1000		V	I	2730.614	2729.807	2		1000	
V	I	2687.308	2686.512	10	12.	1000		V	I	2732.154	2731.347	80	85.	1000	
V	I	2687.798	2687.001	1		1000		V	I	2732.326	2731.518	20		1000	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	I	2734.142	2733.334	8	8.	1000	V	I	2854.894	2854.057	4	68.	1000
V	I	2738.884	2738.075	5	85.	1000	V	I	2856.089	2855.252	20	6.	1000
V	I	2743.060	2742.250	2		489	V	I	2856.355	2855.518	6	77.	1000
V	I	2748.345	2747.534	6	8.	1000	V	I	2856.657	2855.739	2	68.	1000
V	I	2753.896	2753.084	8		1000	V	I	2858.810	2857.972	20	77.	1000
V	I	2756.466	2755.653	10		1000	V	I	2859.624	2858.757	10	77.	1000
V	I	2758.56	2757.75	2		1000	V	I	2859.839	2859.001	4	68.	1000
V	I	2766.92	2766.10	1		1000	V	I	2860.834	2859.997	25	6.	1000
V	I	2769.12	2768.30	3	78.	1000	V	I	2862.515	2861.677	1		1000
V	I	2769.75	2768.93	6	84.	1000	V	I	2863.255	2862.418	10	68.	1000
V	I	2771.76	2770.94	2		1000	V	I	2863.914	2863.076	12	77.	1000
V	I	2774.48	2773.66	8	84.	1000	V	I	2865.225	2864.386	30	6.	1000
V	I	2774.83	2774.01	3	69.	1000	V	I	2867.293	2866.447	20	77.	1000
V	I	2776.730	2775.911	2		1000	V	I	2867.460	2866.620	15	98.	1000
V	I	2777.29	2776.47	6		1000	V	I	2867.809	2866.971	10	68.	1000
V	I	2777.49	2776.67	2		1000	V	I	2868.970	2868.130	20	98.	1000
V	I	2777.976	2777.157	5		1000	V	I	2870.324	2869.484	3	67.	1000
V	I	2778.52	2777.70	8		1000	V	I	2870.88	2870.04	5	67.	1000
V	I	2778.876	2778.058	4	69.	1000	V	I	2871.415	2870.575	35	6.	1000
V	I	2784.58	2783.76	7	92.	1000	V	I	2874.219	2873.378	2		1000
V	I	2786.037	2785.216	3		1000	V	I	2888.551	2887.707	2	5.	1000
V	I	2786.34	2785.52	8		1000	V	I	2889.368	2888.523	2	5.	1000
V	I	2786.48	2785.66	10	92.	1000	V	I	2891.41	2890.56	5		1000
V	I	2788.98	2788.16	2		1000	V	I	2892.276	2891.430	2		1000
V	I	2799.351	2798.526	2		1000	V	I	2892.823	2891.977	2		1000
V	I	2800.053	2799.229	3		1000	V	I	2894.32	2893.47	4	66.	1000
V	I	2816.820	2815.994	5		1000	V	I	2895.430	2894.583	8	5.	1000
V	I	2835.71	2834.88	3		1000	V	I	2896.01	2895.16	4		1000
V	I	2836.492	2835.660	5	56.	1000	V	I	2899.669	2898.822	5	4.	1000
V	I	2837.546	2836.714	3	6.	1000	V	I	2900.055	2899.207	20	5.	1000
V	I	2840.26	2839.43	4	94.	1000	V	I	2900.451	2899.602	30	5.	1000
V	I	2845.75	2844.92	2	94.	1000	V	I	2901.71	2900.86	5		1000
V	I	2847.380	2846.600	20		1000	V	I	2904.549	2903.700	12	4.	1000
V	I	2849.643	2848.807	15	6.	1000	V	I	2904.975	2904.126	20	5.	1000
V	I	2849.921	2849.086	4		1000	V	I	2906.984	2906.134	40	5.	1000
V	I	2850.032	2849.197	15	6.	1000	V	I	2911.285	2910.435	5	4.	1000
V	I	2852.620	2851.784	20	6.	1000	V	I	2915.150	2914.299	2		1000
V	I	2853.735	2852.899	25	91.	1000	V	I	2915.28	2914.43	2		1000
V	I	2854.380	2853.579	2		1000	V	I	2915.774	2914.924	50	5.	1000
V	I	2854.66	2853.82	3	68.	1000	V	I	2916.18	2915.33	10	4.	1000

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	2916.85	2916.00	8	83.	1000		V	I	2957.43	2956.57	1		1000	
V	I	2918.37	2917.52	4		1000		V	I	2958.037	2957.176	8	76.	1000	
V	I	2918.79	2917.94	8	83.	1000		V	I	2958.16	2957.30	10	1.	1000	
V	I	2920.783	2919.931	6	3.	1000		V	I	2960.85	2959.99	2		1000	
V	I	2922.03	2921.18	6	101.	1000		V	I	2961.712	2960.849			1000	
V	I	2923.435	2922.582	4	3.	1000		V	I	2961.990	2961.127	10	76.	1000	
V	I	2923.568	2922.715	5	101.	1000		V	I	2962.93	2962.07	1		1000	
V	I	2924.26	2923.41	2		1000		V	I	2963.646	2962.784	30	1.	1000	
V	I	2924.480	2923.627	70	5.	1000		V	I	2964.671	2963.818	6	75.	1000	
V	I	2925.77	2924.92	5	101.	1000		V	I	2966.943	2966.079	0		1000	
V	I	2926.734	2925.880	4	3.	1000		V	I	2969.15	2968.29	5	76.	1000	
V	I	2927.112	2926.258	12	4.	1000		V	I	2969.845	2968.981	3	75.	1000	
V	I	2928.500	2927.646	10	101.	1000		V	I	2970.21J	2969.363	1		1000	
V	I	2929.47	2928.62	2		1000		V	I	2970.733	2969.868	0		1000	
V	I	2929.59	2928.74	1		1000		V	I	2975.083	2974.217	8	75.	1000	
V	I	2931.75	2930.89	15	101.	1000		V	I	2975.942	2975.077	8	82.	1000	
V	I	2934.090	2933.234	3	101.	1000		V	I	2977.393	2976.527	8	75.	1000	
V	I	2935.502	2934.646	2		1000		V	I	2978.415	2977.550	25	1.	1000	
V	I	2935.58	2934.72	20	101.	1000		V	I	2979.803	2978.936	4	65.	1000	
V	I	2936.736	2935.880	15	3.	1000		V	I	2980.08	2979.21	2		1000	
V	I	2938.553	2937.696	15	3.	1000		V	I	2982.405	2981.537	0	65.	1000	
V	I	2939.16	2938.30	5	101.	1000		V	I	2983.05	2982.18	2		1000	
V	I	2939.53	2938.67	6	2.	1000		V	I	2991.18	2990.31	1		1000	
V	I	2940.12	2939.26	2		1000		V	I	2991.80	2990.93	8	58.	1000	
V	I	2941.97	2941.11	1		1000		V	I	2992.01	2991.14	2		1000	
V	I	2942.88	2942.02	00		1000		V	I	2993.66	2992.79	00		1000	
V	I	2943.19	2942.33	10	3.	1000		V	I	2994.88	2994.01	1		1000	
V	I	2943.219	2942.354	10	3.	1000		V	I	2995.37	2994.50	1		1000	
V	I	2944.055	2943.197	30	1.	1000		V	I	2995.48	2994.61	2		1000	
V	I	2944.70	2943.84	12	76.	1000		V	I	2996.488	2995.617	4	64.	1000	
V	I	2945.62	2944.76	10	76.	1000		V	I	2997.35	2996.48	6	82.	1000	
V	I	2947.40	2946.54	15	1.	1000		V	I	2997.95	2997.08	3	116.	1000	
V	I	2949.95	2949.09	1		1000		V	I	2998.74	2997.87	5	116.	1000	
V	I	2950.48	2949.62	25	3.	1000		V	I	2999.49	2998.62	4	64.	1000	
V	I	2950.77	2949.91	2	101.	1000		V	I	3000.07	2999.20	12	58.	1000	
V	I	2952.70	2951.84	2		1000		V	I	3001.438	3000.556	00		1000	
V	I	2954.804	2953.943	50	3.	1000		V	I	3001.92	3001.05	1		1000	
V	I	2955.19	2954.33	20	1.	1000		V	I	3002.77	3001.90	10	116.	1000	
V	I	2956.667	2955.806	15	3.	1000		V	I	3003.321	3002.450	6		1000	
V	I	2957.003	2956.142	1		1000		V	I	3003.52	3002.65	8	47.	1000	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	3004.161	3003.288	5		1000	V	I	3057.223	3056.339	100	17.	1000
V	I	3005.21	3004.33	4	47.	1000	V	I	3057.48	3056.59	1		1000
V	I	3005.70	3004.82	10	47.	1000	V	I	3061.343	3060.457	125	17.	1000
V	I	3007.12	3006.24	5	116.	1000	V	I	3061.82	3060.93	2	15.	1000
V	I	3007.22	3006.34	6	75.	1000	V	I	3064.611	3063.725	12	16.	1000
V	I	3007.78	3006.90	5	116.	1000	V	I	3067.261	3066.373	125	17.	1000
V	I	3010.54	3009.66	1		1000	V	I	3067.40	3066.51	20	17.	1000
V	I	3011.72	3010.84	1		1000	V	I	3068.006	3067.117	6		1000
V	I	3012.27	3011.40	2		1000	V	I	3070.536	3069.648	30	15.	1000
V	I	3012.46	3011.58	1		1000	V	I	3071.77	3070.88	2		1000
V	I	3015.07	3014.19	4		1000	V	I	3073.62	3072.73	2		1000
V	I	3015.21	3014.33	15	116.	1000	V	I	3074.718	3073.825	60	17.	1000
V	I	3015.848	3014.972	1		1000	V	I	3074.95	3074.06	10		1000
V	I	3017.05	3016.17	20	58.	1000	V	I	3075.72	3074.83	8		1000
V	I	3017.268	3016.392	1		1000	V	I	3076.158	3075.269	10	105.	1000
V	I	3022.66	3021.78	6	75.	1000	V	I	3076.825	3075.935	8	57.	1000
V	I	3023.65	3022.77	10		1000	V	I	3077.52	3076.63	4		1000
V	I	3027.95	3027.07	2		1000	V	I	3077.58	3076.69	5		1000
V	I	3031.81	3030.93	5		1000	V	I	3078.62	3077.73	6		1000
V	I	3031.888	3031.009	10	74.	1000	V	I	3078.75	3077.86	5		1000
V	I	3034.63	3033.75	1		1000	V	I	3080.256	3079.365	4		1000
V	I	3038.253	3037.372	2		1000	V	I	3081.05	3080.16	6	15.	1000
V	I	3038.94	3038.06	1		1000	V	I	3081.23	3080.34	12	57.	1000
V	I	3039.591	3038.710	10		1000	V	I	3082.903	3082.010	6	105.	1000
V	I	3040.186	3039.305	1		1000	V	I	3083.002	3082.109	50	17.	1000
V	I	3040.34	3039.46	1		1000	V	I	3084.433	3083.545	30	57.	1000
V	I	3041.01	3040.13	1		1000	V	I	3085.276	3084.384	20		1000
V	I	3042.71	3041.83	8		1000	V	I	3086.816	3085.923	1		1000
V	I	3043.555	3042.672	15		1000	V	I	3087.965	3087.072	15	57.	1000
V	I	3044.007	3043.123	50	17	1000	V	I	3088.38	3087.49	2		1000
V	I	3044.437	3043.553	50	17.	1000	V	I	3089.012	3088.119	30	56.	1000
V	I	3045.821	3044.938	50	17.	1000	V	I	3090.029	3089.14	25	37.	1000
V	I	3048.09	3047.21	1		1000	V	I	3091.29	3090.40	1	15.	1000
V	I	3051.21	3050.33	1		1000	V	I	3091.433	3090.538	3		1000
V	I	3051.280	3050.396	25	74.	1000	V	I	3091.70	3090.81	4		1000
V	I	3051.767	3050.883	35	16.	1000	V	I	3092.31	3091.42	20	15.	1000
V	I	3052.27	3051.39	00		1000	V	I	3092.447	3091.552	15	15.	1000
V	I	3053.080	3052.195	20	15.	1000	V	I	3093.62	3092.72	8		1000
V	I	3054.53	3053.65	80	17.	1000	V	I	3093.74	3092.85	1		1000
V	I	3055.78	3054.89	1	16.	1000	V	I	3094.14	3093.24	6	15.	1000

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	3094.69	3093.79	25	57.	1000	V	I	3162.8	3161.9	3		1000
V	I	3095.594	3094.699	20	56.	1000	V	I	3164.80	3163.89	4		1000
V	I	3096.80	3095.90	5	57.	1000	V	I	3165.4	3164.5	1		1000
V	I	3096.94	3096.04	2		1000	V	I	3166.50	3165.59	3		1000
V	I	3097.659	3096.763			1000	V	I	3170.5	3169.6	1		1000
V	I	3100.49	3099.59	2		1000	V	I	3178.75	3177.83	1		1000
V	I	3102.3	3101.4	1		1000	V	I	3181.01	3180.09	1		1000
V	I	3104.50	3103.60	1	56.	1000	V	I	3181.48	3180.56	1		1000
V	I	3104.89	3103.99	6	56.	1000	V	I	3182.55	3181.63	1		1000
V	I	3107.02	3106.12	5	56.	1000	V	I	3183.68	3182.76	1		1000
V	I	3108.041	3107.142	5	57.	1000	V	I	3184.330	3183.415	150	14.	1000
V	I	3109.46	3108.56	1		1000	V	I	3184.88	3183.96	125	14.	1000
V	I	3110.32	3109.42	1	489		V	I	3184.913	3183.995	150	14.	1000
V	I	3111.8	3110.9	1		1000	V	I	3186.320	3185.404	40	14.	1000
V	I	3113.03	3112.13	3		1000	V	I	3189.015	3188.096	3		1000
V	I	3113.83	3112.93	8	56.	1000	V	I	3189.997	3189.078	1		1000
V	I	3117.25	3116.35	1		1000	V	I	3194.839	3193.919	6		1000
V	I	3122.68	3121.78	4	56.	1000	V	I	3195.32	3194.40	2		1000
V	I	3124.15	3123.25	1		1000	V	I	3195.49	3194.57	1		1000
V	I	3132.2	3131.3	1		1000	V	I	3195.84	3194.92	1		1000
V	I	3132.8	3131.9	1		1000	V	I	3198.932	3198.012	20	14.	1000
V	I	3133.9	3133.0	1		1000	V	I	3200.741	3199.819	6		1000
V	I	3135.44	3134.54	1		1000	V	I	3202.149	3201.227	2		1000
V	I	3136.08	3135.17	2		1000	V	I	3203.305	3202.383	25	14.	1000
V	I	3139.41	3138.50	3		1000	V	I	3205.116	3204.193	3	13.	1000
V	I	3139.95	3139.04	3		1000	V	I	3206.180	3205.257	5		1000
V	I	3140.88	3139.97	4		1000	V	I	3206.504	3205.581	15	73.	1000
V	I	3144.1	3143.2	1		1000	V	I	3207.847	3206.923	1		1000
V	I	3146.56	3145.65	1		1000	V	I	3208.338	3207.415	20	14.	1000
V	I	3147.7	3146.8	1		1000	V	I	3211.020	3210.096	4		1000
V	I	3148.163	3147.255	8		1000	V	I	3211.351	3210.427	2		1000
V	I	3148.88	3147.97	3		1000	V	I	3212.248	3211.323	0		1000
V	I	3150.94	3150.03	2		1000	V	I	3212.493	3211.569	1		1000
V	I	3151.50	3150.59	5		1000	V	I	3213.361	3212.437	15	73.	1000
V	I	3153.66	3152.75	2		1000	V	I	3214.863	3213.939	2		1000
V	I	3154.45	3153.54	5		1000	V	I	3216.304	3215.379	4	13.	1000
V	I	3157.10	3156.19	10		1000	V	I	3218.040	3217.113	10	14.	1000
V	I	3157.80	3156.89	2		1000	V	I	3219.281	3218.355	1		1000
V	I	3159.68	3158.77	1		1000	V	I	3219.800	3218.874	5	72.	1000
V	I	3160.78	3159.87	2		1000	V	I	3226.418	3225.490	1		1000

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	3226.56	3225.63	1		1000		V	I	3278.733	3277.791	0		1000	
V	I	3227.035	3226.106	4	14.	1000		V	I	3278.880	3277.939	5	12.	1000	
V	I	3228.045	3227.117	3		1000		V	I	3284.253	3283.311	15	12.	1000	
V	I	3228.336	3227.408	4	134.	1000		V	I	3285.304	3284.361	6	71.	1000	
V	I	3229.111	3228.182	3		1000		V	I	3289.378	3288.435	2		1000	
V	I	3230.533	3229.604	4	134.	1000		V	I	3290.469	3289.525	M		1000	
V	I	3231.371	3230.441	1		1000		V	I	3292.622	3291.678	4	12.	1000	
V	I	3231.574	3230.645	6	13.	1000		V	I	3293.506	3292.561	0		1000	
V	I	3234.114	3233.183	6	72.	1000		V	I	3296.411	3295.465	1		1000	
V	I	3234.427	3233.497	1		1000		V	I	3296.734	3295.788	0		1000	
V	I	3235.66	3234.73	2		1000		V	I	3299.092	3298.147	15	12.	1000	
V	I	3239.825	3238.894	1		1000		V	I	3300.037	3299.089	3	55.	1000	
V	I	3242.099	3241.167	4		1000		V	I	3300.264	3299.256	1		1000	
V	I	3242.965	3242.033	1		1000		V	I	3300.535	3299.588	0		1000	
V	I	3243.372	3242.440	0		489		V	I	3300.919	3299.972	2		1000	
V	I	3244.207	3243.274	3		1000		V	I	3306.050	3305.101	0		1000	
V	I	3244.890	3243.957	1		1000		V	I	3309.199	3308.250	3	12.	1000	
V	I	3247.76	3246.83	1		1000		V	I	3309.84	3308.89	1		1000	
V	I	3249.630	3248.696	3		1000		V	I	3310.128	3309.179	8	55.	1000	
V	I	3250.501	3249.567	10	13.	1000		V	I	3313.95	3313.00	2		1000	
V	I	3250.724	3249.790	0		1000		V	I	3314.92	3313.97	3		1000	
V	I	3250.864	3249.930	3		1000		V	I	3316.82	3315.87	1		1000	
V	I	3250.967	3250.033	2		1000		V	I	3319.963	3319.010	4		1000	
V	I	3253.80	3252.86	1		1000		V	I	3320.72	3319.77	1		1000	
V	I	3255.719	3254.783	10	13.	1000		V	I	3321.092	3320.140	3		1000	
V	I	3256.584	3255.649	9		1000		V	I	3322.637	3321.684	5		1000	
V	I	3257.40	3256.46	1		1000		V	I	3325.161	3324.208	1		1000	
V	I	3257.715	3256.779	1	138.	1000		V	I	3325.347	3324.393	3		1000	
V	I	3260.468	3259.531	5		1000		V	I	3325.442	3324.489	1		1000	
V	I	3261.319	3260.382			1000		V	I	3327.33	3326.38	1		1000	
V	I	3261.824	3260.889			1000		V	I	3328.09	3327.14	00		1000	
V	I	3262.017	3261.080	6		1000		V	I	3328.937	3327.983	2		1000	
V	I	3263.000	3262.063	5		1000		V	I	3329.358	3328.404	2		1000	
V	I	3264.174	3263.238	15	12.	1000		V	I	3330.812	3329.858	12	55.	1000	
V	I	3266.825	3265.887	5	138.	1000		V	I	3333.404	3332.449	00		1000	
V	I	3267.016	3266.078	4		1000		V	I	3334.529	3333.573	2		1000	
V	I	3272.33	3271.39	3		1000		V	I	3335.10	3334.14	00		1000	
V	I	3272.575	3271.635	12	12.	1000		V	I	3337.168	3336.212	1		1000	
V	I	3273.127	3272.188	1		1000		V	I	3337.306	3336.350	2		1000	
V	I	3273.965	3273.025	7	71.	1000		V	I	3337.75	3336.79	2		1000	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	I	3341.13	3340.17	1		1000		V	I	3403.340	3402.367			1000	
V	I	3343.24	3342.28	2		1000		V	I	3403.545	3402.572	9	46.	1000	
V	I	3345.97	3345.01	00		1000		V	I	3403.951	3402.977	0		1000	
V	I	3357.319	3356.358	10	54.	1000		V	I	3404.338	3403.364	5		1000	
V	I	3363.1	3362.1	1		1000		V	I	3405.938	3404.964	2		1000	
V	I	3364.515	3363.551	4		1000		V	I	3406.134	3405.160	6	46.	1000	
V	I	3366.519	3365.556	10	54.	1000		V	I	3407.592	3406.617	2		1000	
V	I	3367.838	3366.875	4		1000		V	I	3407.811	3406.838	6	46.	1000	
V	I	3368.00	3367.04	1		1000		V	I	3408.974	3408.001	3		1000	
V	I	3370.0	3369.0	1		1000		V	I	3409.43	3408.46	1		1000	
V	I	3371.161	3370.196	1		1000		V	I	3410.072	3409.098	4		1000	
V	I	3372.082	3371.118	3		1000		V	I	3411.93	3410.96	1		1000	
V	I	3373.76	3372.80	00		1000		V	I	3414.74	3413.76	1		1000	
V	I	3375.001	3374.036	3		1000		V	I	3415.177	3414.201	5		1000	
V	I	3377.025	3376.059	8		1000		V	I	3415.75	3414.77	150		1000	
V	I	3378.365	3377.398	10	54.	1000		V	I	3417.514	3416.541	2		1000	
V	I	3378.595	3377.629	15	54.	1000		V	I	3418.044	3417.069	5		1000	
V	I	3380.32	3379.35	2		489		V	I	3419.493	3418.517	5		1000	
V	I	3384.78	3383.76	1		489		V	I	3424.306	3423.328			1000	
V	I	3385.570	3384.602	5		1000		V	I	3424.843	3423.867	3		1000	
V	I	3386.96	3385.91	1		489		V	I	3426.049	3425.072	6		1000	
V	I	3387.879	3386.910	0		1000		V	I	3426.265	3425.287	1		1000	
V	I	3388.452	3387.386	2		1000		V	I	3426.937	3425.958	1		1000	
V	I	3390.52	3389.50	00		1000		V	I	3427.70	3426.73	1		1000	
V	I	3391.440	3390.388	2		1000		V	I	3428.07	3427.09	1		1000	
V	I	3391.785	3390.767	6		1000		V	I	3428.465	3427.486	1		1000	
V	I	3392.584	3391.614	0		1000		V	I	3429.469	3428.490			1000	
V	I	3393.42	3392.45	1		1000		V	I	3433.03	3432.05	1		1000	
V	I	3393.699	3392.729	1		1000		V	I	3437.062	3436.080	1		1000	
V	I	3395.73	3394.76	2		1000		V	I	3438.760	3437.779	1		1000	
V	I	3396.496	3395.524	3		1000		V	I	3438.858	3437.876	2		1000	
V	I	3397.195	3396.224			1000		V	I	3439.97	3438.99	00		1000	
V	I	3397.485	3396.514	3		1000		V	I	3440.641	3439.659			1000	
V	I	3398.554	3397.583	6		1000		V	I	3442.988	3442.006	2		1000	
V	I	3398.817	3397.845	4		1000		V	I	3443.299	3442.317	2		1000	
V	I	3399.245	3398.272	1		1000		V	I	3443.910	3442.927	1		1000	
V	I	3401.172	3400.200	1		1000		V	I	3444.53	3443.55	1		1000	
V	I	3401.367	3400.396	12	46.	1000		V	I	3445.84	3444.86	1		1000	
V	I	3402.318	3401.345	2		1000		V	I	3446.795	3445.812	2		1000	
V	I	3402.866	3401.894			1000		V	I	3448.07	3447.09	00		1000	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2017.98	2017.32	2		478
V	II	2018.11	2017.46	2	126.	478
V	II	2020.12	2019.47	10	96.	478
V	II	2021.19	2020.54	10	96.	478
V	II	2021.48	2020.83	15	126.	478
V	II	2022.04	2021.38	10		478
V	II	2022.49	2021.83	5	126.	478
V	II	2023.35	2022.66	15		478
V	II	2024.21	2023.56	50	162.	478
V	II	2025.50	2024.84	0	95.	478
V	II	2026.12	2025.47	15	95.	478
V	II	2029.54	2028.88	15		478
V	II	2032.06	2031.40	30		478
V	II	2034.16	2033.50	10		478
V	II	2035.72	2035.06	60		478
V	II	2036.44	2035.78	15		478
V	II	2038.16	2037.50	25		478
V	II	2038.49	2037.83	50		478
V	II	2039.95	2039.29	60	79.	478
V	II	2044.94	2044.28	5	188.	478

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	II	2046.78	2046.12	0		478	
V	II	2049.41	2048.75	15		478	
V	II	2050.33	2049.67	5	146.	478	
V	II	2051.93	2051.27	5	203.	478	
V	II	2052.45	2051.79	30	203.	478	
V	II	2053.04	2052.38	10	157.	478	
V	II	2054.67	2054.01	0		478	
V	II	2054.93	2054.27	0		478	
V	II	2055.51	2054.85	70		478	
V	II	2055.81	2055.15	5	74.	478	
V	II	2056.21	2055.55	8	74.	478	
V	II	2057.55	2056.89	15	157.	478	
V	II	2057.86	2057.20	15	74.	478	
V	II	2058.02	2057.36	25	74.	478	
V	II	2059.00	2058.34	40	74.	478	
V	II	2062.22	2061.56	15		478	
V	II	2062.66	2062.00	10		478	
V	II	2063.78	2063.12	20	157.	478	
V	II	2065.44	2064.78	2		478	
V	II	2066.42	2065.76	40	115.	478	
V	II	2067.49	2066.83	8	212.	478	
V	II	2069.20	2068.54	15	173.	478	
V	II	2069.46	2068.80	60	173.	478	
V	II	2071.45	2070.79	15	173.	478	
V	II	2073.09	2072.43	30	173.	478	
V	II	2075.53	2074.87	25	173.	478	
V	II	2075.80	2075.13	15	173.	478	
V	II	2077.18	2076.52	0	173.	478	
V	II	2077.53	2076.87	60		478	
V	II	2078.25	2077.58	15	211.	478	
V	II	2078.45	2077.79	40		478	
V	II	2079.96	2079.29	10		478	
V	II	2088.21	2087.54	15		478	
V	II	2088.59	2087.92	20	114.	478	
V	II	2091.00	2090.33	25	194.	478	
V	II	2092.48	2091.81	2		478	
V	II	2095.72	2095.05	15	105.	478	
V	II	2096.04	2095.37	15	105.	478	
V	II	2096.61	2095.94	25	105.	478	
V	II	2097.70	2097.03	2		478	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	II	2098.67	2098.00	5	156.	478	
V	II	2099.27	2098.60	0		478	
V	II	2099.83	2099.16	30	94.	478	
V	II	2100.14	2099.47	0		478	
V	II	2100.92	2100.25	0		478	
V	II	2101.84	2101.17	50	94.	478	
V	II	2102.53	2101.86	20	156.	478	
V	II	2104.20	2103.53	30	172.	478	
V	II	2104.37	2103.70	80	94.	478	
V	II	2108.07	2107.40	10	125.	478	
V	II	2109.94	2109.27	8	156.	478	
V	II	2111.15	2110.48	5		478	
V	II	2111.71	2111.04	15		478	
V	II	2114.70	2114.03	30	172.	478	
V	II	2114.97	2114.30	15	172.	478	
V	II	2117.966	2117.293	25	172.	478	
V	II	2118.155	2117.482	12	8.	478	
V	II	2119.10	2118.43	30	137.	478	
V	II	2119.52	2118.84	25		478	
V	II	2119.83	2119.15	40		478	
V	II	2120.235	2119.562	15		478	
V	II	2122.214	2121.540	10	172.	478	
V	II	2122.78	2122.11	1	8.	478	
V	II	2124.014	2123.340	60	8.	478	
V	II	2124.29	2123.62	10	8.	478	
V	II	2124.68	2124.00	5	8.	478	
V	II	2127.259	2126.585	25		478	
V	II	2127.607	2126.932	20	8.	478	
V	II	2128.01	2127.34	5	8.	478	
V	II	2128.916	2128.241	7	8.	478	
V	II	2130.152	2129.477	40	7.	478	
V	II	2131.10	2130.42	5	180.	478	
V	II	2131.52	2130.85	0		478	
V	II	2132.52	2131.85	80	8.	478	
V	II	2133.72	2133.04	60		478	
V	II	2134.80	2134.12	200	7.	478	
V	II	2137.99	2137.31	100	7.	478	
V	II	2138.85	2138.17	60	7.	478	
V	II	2140.475	2139.798	100	7.	478	
V	II	2140.741	2140.064	150	7.	478	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2142.38	2141.70	4	136.	478	V	II	2186.65	2185.96	40	210.	478
V	II	2142.650	2141.973	100	7.	478	V	II	2187.63	2186.94	20	104.	478
V	II	2143.08	2142.40	3	124.	478	V	II	2189.55	2188.86	2		478
V	II	2143.42	2142.74	4	6.	478	V	II	2190.91	2190.22	30	104.	478
V	II	2143.716	2143.038	60	7.	478	V	II	2191.17	2190.48	8	145.	478
V	II	2144.384	2143.706	5	6.	478	V	II	2193.60	2192.91	2		478
V	II	2144.78	2144.10	5		478	V	II	2194.03	2193.34	2		478
V	II	2146.05	2145.37	0		478	V	II	2195.53	2194.84	8	209.	478
V	II	2146.669	2145.990	40	6.	478	V	II	2195.79	2195.10	2		478
V	II	2148.20	2147.52	20	6.	478	V	II	2196.38	2195.69	15	201.	478
V	II	2148.68	2148.00	8		478	V	II	2199.213	2198.524	20	145.	478
V	II	2149.10	2148.42	40	6.	478	V	II	2200.132	2199.443	10	201.	478
V	II	2150.065	2149.386	8	124.	478	V	II	2200.349	2199.660	7	201.	478
V	II	2151.514	2150.835	60		478	V	II	2206.39	2205.70	2		478
V	II	2151.711	2151.023	50		478	V	II	2210.720	2210.029	10	208.	478
V	II	2152.492	2151.812	50		478	V	II	2210.996	2210.305	8	28.	478
V	II	2155.10	2154.42	0		478	V	II	2211.85	2211.16	2		478
V	II	2156.29	2155.61	15	113.	478	V	II	2212.07	2211.38	2	208.	478
V	II	2157.73	2157.05	8		478	V	II	2216.478	2215.786	9	208.	478
V	II	2159.04	2158.36	0		478	V	II	2216.746	2216.054	3	28.	1000
V	II	2159.81	2159.13	0		478	V	II	2218.01	2217.32	8	28.	478
V	II	2160.21	2159.53	0		478	V	II	2220.101	2219.408	3	208.	478
V	II	2161.23	2160.55	5		478	V	II	2220.907	2220.214	100	28.	478
V	II	2162.16	2161.48	20	124.	478	V	II	2225.539	2224.845	1		478
V	II	2164.36	2163.68	20		478	V	II	2230.680	2229.985	80	28.	478
V	II	2165.06	2164.38	15		478	V	II	2244.166	2243.468	4		478
V	II	2166.83	2166.15	20		478	V	II	2247.030	2246.332	3	16.	478
V	II	2168.37	2167.69	8	202.	478	V	II	2247.35	2246.65	1	16.	478
V	II	2168.76	2168.08	10	29.	478	V	II	2249.15	2248.45	1		478
V	II	2169.24	2168.56	0		478	V	II	2249.612	2248.913	4	16.	478
V	II	2170.73	2170.05	10	202.	478	V	II	2251.081	2250.382	3	16.	478
V	II	2171.06	2170.38	15		478	V	II	2251.190	2250.490	5	16.	478
V	II	2171.82	2171.12	2		478	V	II	2251.499	2250.900	5	16.	478
V	II	2172.524	2171.840	25	209.	478	V	II	2251.814	2251.114	6	171.	478
V	II	2176.517	2175.833	5		478	V	II	2252.250	2251.500	7		478
V	II	2183.77	2183.08	2		478	V	II	2253.653	2252.953	7	16.	478
V	II	2184.86	2184.17	5	145.	478	V	II	2256.65	2255.95	1		478
V	II	2185.10	2184.41	2		478	V	II	2257.684	2256.984	20	16.	478
V	II	2185.58	2184.89	2		478	V	II	2259.34	2258.64	2		478
V	II	2186.076	2185.399	50	209.	478	V	II	2259.515	2258.814	50	16.	478

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2261.786	2261.084	30	16.	478		V	II	2305.496	2304.785	7		478	
V	II	2262.55	2261.85	10		478		V	II	2309.542	2308.831	5	44.	478	
V	II	2263.106	2262.404	9	171.	478		V	II	2309.784	2309.072	10	26.	478	
V	II	2263.40	2262.70	2		478		V	II	2312.62	2311.91	1		478	
V	II	2264.314	2263.612	3		478		V	II	2313.012	2312.299	2		478	
V	II	2268.315	2267.612	5	15.	478		V	II	2314.652	2313.939	9	44.	478	
V	II	2268.415	2267.712	3		478		V	II	2314.768	2314.055	3	44.	478	
V	II	2269.064	2268.361	4		478		V	II	2315.70	2314.99	2		478	
V	II	2269.25	2268.55	1		478		V	II	2322.570	2321.855	1		478	
V	II	2269.996	2269.293	3	15.	478		V	II	2330.860	2330.144	12		478	
V	II	2271.889	2271.185	8		478		V	II	2335.921	2335.204	2	44.	478	
V	II	2272.552	2271.848	10	15.	478		V	II	2336.044	2335.326	10	44.	478	
V	II	2273.141	2272.437	1		478		V	II	2336.198	2335.480	40	55.	478	
V	II	2273.728	2273.024	40	15.	478		V	II	2336.816	2336.098	30	57.	478	
V	II	2274.320	2273.616	9	170.	478		V	II	2338.674	2337.956	4	55.	478	
V	II	2274.59	2273.89	2	27.	478		V	II	2342.077	2341.358	4	56.	478	
V	II	2275.363	2274.658	1		478		V	II	2342.861	2342.142	60	55.	478	
V	II	2276.291	2275.586	7	15.	478		V	II	2347.588	2346.868	25	54.	478	
V	II	2276.588	2275.883	7	27.	478		V	II	2348.228	2347.507	8	55.	478	
V	II	2278.497	2277.792	1		478		V	II	2351.96	2351.24	6		478	
V	II	2278.803	2278.098	4		478		V	II	2352.898	2352.177	100	35.	478	
V	II	2279.677	2278.972	40	161.	478		V	II	2353.88	2353.16	1		478	
V	II	2280.082	2279.376	15	27.	478		V	II	2355.377	2354.656	20	13.	478	
V	II	2280.467	2279.762	20	161.	478		V	II	2355.953	2355.232	4	25.	478	
V	II	2281.044	2280.338	60	123.	478		V	II	2356.931	2356.209	3		478	
V	II	2281.287	2280.581	4		478		V	II	2358.254	2357.532	3		478	
V	II	2281.941	2281.235	60	123.	478		V	II	2358.532	2357.810	60	187.	478	
V	II	2282.307	2281.601	60	123.	478		V	II	2361.057	2360.334	50	43.	478	
V	II	2283.569	2282.863	6	123.	478		V	II	2363.355	2362.632	20	185.	478	
V	II	2284.175	2283.469	7	123.	478		V	II	2365.113	2364.390	2		478	
V	II	2284.472	2283.766	40		478		V	II	2367.214	2366.490	25	25.	478	
V	II	2285.455	2284.748	10	45.	478		V	II	2367.608	2366.883	20	43.	478	
V	II	2285.627	2284.920	15	26.	478		V	II	2372.893	2372.168	15		478	
V	II	2289.926	2289.219	70	27.	478		V	II	2373.309	2372.584	20	25.	478	
V	II	2292.089	2291.381	3		478		V	II	2375.04	2374.31	2		478	
V	II	2293.296	2292.588	30	26.	478		V	II	2375.375	2374.649	6		478	
V	II	2295.701	2294.992	40	26.	478		V	II	2377.06	2376.33	1		478	
V	II	2296.213	2295.504	20	26W	478		V	II	2379.876	2379.149	100	43.	478	
V	II	2302.966	2302.256	5	44.	478		V	II	2381.637	2380.910	120	25.	478	
V	II	2303.948	2303.238	10	26.	478		V	II	2382.759	2382.032	60		478	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	II	2384.160	2383.432	6		478		V	II	2451.362	2450.619	9	92.	478	
V	II	2384.723	2383.995	80	25.	478		V	II	2451.477	2450.734	20	41.	478	
V	II	2385.724	2384.996	6		478		V	II	2453.516	2452.773	4		478	
V	II	2387.18	2386.45	2		478		V	II	2454.089	2453.346	80	92.	478	
V	II	2388.66	2387.93	3		478		V	II	2454.600	2453.857	3		478	
V	II	2388.988	2388.260	5	73.	478		V	II	2455.398	2454.654	2		478	
V	II	2389.873	2389.144	2	43.	478		V	II	2457.252	2456.508	3	41.	478	
V	II	2390.425	2389.696	100	25.	478		V	II	2458.190	2457.446	30	91.	478	
V	II	2391.199	2390.470	15		478		V	II	2458.547	2457.803	5		478	
V	II	2391.955	2391.226	10	73.	478		V	II	2459.033	2458.288	50	39.	478	
V	II	2392.90	2392.17	2		478		V	II	2459.978	2459.233	5	92.	478	
V	II	2393.428	2392.698	8		478		V	II	2460.103	2459.358	15	92.	478	
V	II	2394.544	2393.814	8	73.	478		V	II	2461.41	2460.73	1		478	
V	II	2395.65	2394.92	2		478		V	II	2462.240	2461.495	40	52.	478	
V	II	2397.658	2396.927	4		478		V	II	2463.902	2463.157	3	91.	478	
V	II	2398.353	2397.622	6	73.	478		V	II	2464.840	2464.094	15	22.	478	
V	II	2400.898	2400.166	4	72.	478		V	II	2465.40	2464.65	1	22.	478	
V	II	2401.623	2400.892	40		478		V	II	2466.016	2465.270	150	92.	478	
V	II	2403.972	2403.240	9	73.	478		V	II	2469.400	2468.654	8	23.	478	
V	II	2406.549	2405.817	2		478		V	II	2470.135	2469.388	5	40.	478	
V	II	2407.722	2406.989	5	72.	478		V	II	2471.866	2471.119	25	52.	478	
V	II	2408.325	2407.592	5	53.	478		V	II	2473.618	2472.870	5	22.	478	
V	II	2409.163	2408.430	15	42.	478		V	II	2476.199	2475.451	20	71.	478	
V	II	2420.80	2420.07		41.	488	P	V	II	2476.613	2475.865	30	71.	478	
V	II	2423.766	2423.030	6	24.	478		V	II	2477.043	2476.295	5	52.	478	
V	II	2428.053	2427.316	20	41.	478		V	II	2477.712	2476.963	1	22.	478	
V	II	2432.33	2431.59	4	190.	478		V	II	2479.089	2478.340	1	40.	478	
V	II	2433.714	2432.976	20	41.	478		V	II	2479.370	2478.621	20	52.	478	
V	II	2435.68	2434.94	5	24.	478		V	II	2479.792	2479.043	200	71.	478	
V	II	2437.309	2436.570	5		478		V	II	2480.267	2479.518	180	71.	478	
V	II	2438.779	2438.039	10		478		V	II	2483.057	2482.307	150	39.	478	
V	II	2440.514	2439.774	4		478		V	II	2483.814	2483.064	120	71.	478	
V	II	2442.404	2441.664	4	93.	478		V	II	2486.241	2485.490	3		478	
V	II	2445.708	2444.967	60	92.	478		V	II	2489.367	2488.616	6	22.	478	
V	II	2445.848	2445.107	6	39.	478		V	II	2494.328	2493.576	15	5.	478	
V	II	2446.077	2445.336	4		478		V	II	2495.314	2494.562	3		478	
V	II	2447.439	2446.697	30	41.	478		V	II	2495.473	2494.721	4		478	
V	II	2448.350	2447.608	20	93.	478		V	II	2497.755	2497.002	4	51.	478	
V	II	2449.20	2448.46	5		478		V	II	2500.830	2500.076	4	5.	478	
V	II	2450.979	2450.236	10		478		V	II	2503.772	2503.018	180	21.	478	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2505.045	2504.290	7		478		V	II	2551.345	2550.580	3		478	
V	II	2505.69	2504.94	2		478		V	II	2551.352	2550.587	1		782	
V	II	2505.991	2505.236	2		478		V	II	2552.489	2551.724	15	37.	478	
V	II	2506.970	2506.215	200	21.	478		V	II	2553.030	2552.264	2		478	
V	II	2509.02	2508.26	2		478		V	II	2553.725	2552.960	60	69.	478	
V	II	2509.609	2508.854	4	51.	478		V	II	2553.794	2553.028	40	69.	478	
V	II	2513.568	2512.812	2		478		V	II	2554.403	2553.637	3		782	
V	II	2514.079	2513.322	1		478		V	II	2554.434	2553.668	40	38.	478	
V	II	2515.390	2514.633	200	21.	478		V	II	2554.83	2554.06	10		478	
V	II	2516.479	2515.722	9	21.	478		V	II	2554.99	2554.22	15		478	
V	II	2518.73	2517.97	2		478		V	II	2556.671	2555.905	40	69.	478	
V	II	2521.166	2520.408	2		478		V	II	2557.20	2556.43	1		478	
V	II	2522.129	2521.370	4		478		V	II	2559.855	2559.088	2		478	
V	II	2523.151	2522.392	6	21.	478		V	II	2560.916	2560.149	4	68.	478	
V	II	2523.272	2522.513	20	50.	478		V	II	2562.42	2561.65	2		478	
V	II	2524.37	2523.61	1		478		V	II	2563.528	2562.760	30	102.	478	
V	II	2524.712	2523.953	100	50.	478		V	II	2566.01	2565.24	3		478	
V	II	2528.663	2527.903	230	50.	478		V	II	2566.312	2565.543	15	103.	478	
V	II	2529.226	2528.466	200	50.	478		V	II	2566.512	2565.743	2		478	
V	II	2529.593	2528.833	215	50.	478		V	II	2566.802	2566.033	7	37.	478	
V	II	2532.376	2531.616	3		478		V	II	2567.370	2566.602	15	193.	478	
V	II	2532.662	2531.902	4		478		V	II	2568.22	2567.45	15		478	
V	II	2534.126	2533.365	15	50.	478		V	II	2568.834	2568.065	3	102.	478	
V	II	2534.730	2533.969	9		478		V	II	2569.08	2568.31	3		478	
V	II	2535.025	2534.263	9	50.	478		V	II	2571.829	2571.059	50	102.	478	
V	II	2535.280	2534.519	80	38.	478		V	II	2572.866	2572.096	2	37.	478	
V	II	2537.41	2536.65	2		478		V	II	2573.48	2572.71	4		478	
V	II	2537.616	2536.854	2		478		V	II	2573.97	2573.20	4		478	
V	II	2538.381	2537.619	20	189.	478		V	II	2575.291	2574.520	60	38.	478	
V	II	2539.96	2539.20	20	186.	478		V	II	2577.249	2576.478	20	101.	478	
V	II	2543.22	2542.46	20		478		V	II	2578.299	2577.528	3		478	
V	II	2543.698	2542.935	15	70.	478		V	II	2578.453	2577.682	40	68.	478	
V	II	2545.05	2544.29	10	78.	478		V	II	2579.223	2578.451	8	102.	478	
V	II	2546.224	2545.460	15	4.	478		V	II	2582.611	2581.839	4	101.	478	
V	II	2546.460	2545.696	2		478		V	II	2583.780	2583.007	20	68.	478	
V	II	2547.075	2546.311	5	37.	478		V	II	2584.35	2583.58	2		478	
V	II	2549.450	2548.685	60	38.	478		V	II	2585.724	2584.951	80	102.	478	
V	II	2550.037	2549.272	120	38.	478		V	II	2586.64	2585.87	10		478	
V	II	2550.071	2549.306	20		782		V	II	2588.14	2587.37	5		478	
V	II	2550.418	2549.653	10	69.	478		V	II	2588.902	2588.128	3	200.	478	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2589.25	2588.48	3		478	V	II	2622.562	2621.780	70		782
V	II	2589.563	2588.789	3		478	V	II	2623.52	2622.74	50		478
V	II	2590.94	2590.17	4		478	V	II	2624.574	2623.792	15	89.	478
V	II	2591.32	2590.55	5		478	V	II	2625.642	2624.860	15	216.	478
V	II	2591.87	2591.10	3		478	V	II	2625.79	2625.01	4		478
V	II	2592.990	2592.215	4	37.	478	V	II	2627.20	2626.42	2		478
V	II	2593.878	2593.102	8		782	V	II	2628.10	2627.32	1		478
V	II	2594.42	2593.64	1		478	V	II	2628.87	2628.09	4		478
V	II	2594.69	2593.91	2		478	V	II	2629.53	2628.75	30		478
V	II	2595.21	2594.43	3	216.	478	V	II	2630.50	2629.72	60	216.	478
V	II	2597.99	2597.21	6	200.	478	V	II	2631.26	2630.48	30		782
V	II	2599.43	2598.65	2	216.	478	V	II	2631.449	2630.665	150	89.	478
V	II	2600.81	2600.03	2		478	V	II	2632.267	2631.484	3		478
V	II	2601.38	2600.60	4		478	V	II	2633.74	2632.96	3		478
V	II	2601.86	2601.08	25	216.	478	V	II	2634.06	2633.28	2		478
V	II	2603.10	2602.32	6		478	V	II	2634.69	2633.91	3		478
V	II	2603.72	2602.94	15		478	V	II	2635.15	2634.37	3		478
V	II	2604.18	2603.40	15	216.	478	V	II	2636.21	2635.43	7	216.	478
V	II	2605.29	2604.51	1		478	V	II	2636.424	2635.640	10	89.	478
V	II	2606.48	2605.70	7		478	V	II	2636.78	2636.00	5	214.	478
V	II	2608.19	2607.41	3		478	V	II	2637.19	2636.40	2		478
V	II	2608.78	2608.00	20	218.	478	V	II	2638.04	2637.25	6		478
V	II	2609.44	2608.66	1		478	V	II	2638.408	2637.623	2		478
V	II	2610.38	2609.60	3		478	V	II	2638.671	2637.886	2		478
V	II	2610.58	2609.80	5	216.	478	V	II	2639.31	2638.52	7		478
V	II	2611.39	2610.61	30		478	V	II	2639.53	2638.74	2		478
V	II	2612.02	2611.24	10		478	V	II	2640.08	2639.29	2		478
V	II	2612.29	2611.51	7	216.	478	V	II	2641.65	2640.86	80	213.	478
V	II	2613.04	2612.26	15		478	V	II	2642.998	2642.212	80	89.	478
V	II	2614.633	2613.853	3		782	V	II	2643.51	2642.72	6	199.	478
V	II	2615.175	2614.395	10	90.	478	V	II	2643.90	2643.11	2		478
V	II	2616.18	2615.40	40	216.	478	V	II	2644.48	2643.69	4		478
V	II	2616.67	2615.89	2		478	V	II	2645.150	2644.363	100	213.	478
V	II	2617.02	2616.24	40	90.	478	V	II	2646.627	2645.840	80	89.	478
V	II	2617.44	2616.66	10	215.	478	V	II	2647.012	2646.225	2		478
V	II	2617.88	2617.10	9	216.	478	V	II	2649.263	2648.475	30	192.	478
V	II	2619.18	2618.40	3		478	V	II	2650.16	2649.37	150	213.	478
V	II	2619.41	2618.63	1		478	V	II	2650.924	2650.136	1		478
V	II	2620.26	2619.48	5		478	V	II	2651.20	2650.41	3		478
V	II	2620.84	2620.06	3		478	V	II	2652.36	2651.57	5	213.	478

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2653.55	2652.76	20		478		V	II	2685.934	2685.138	20	110.	478	
V	II	2655.18	2654.39	3		478		V	II	2686.21	2685.41	1	14.	478	
V	II	2655.68	2654.89	2		478		V	II	2686.485	2685.689	30	3.	478	
V	II	2656.47	2655.68	200	213.	478		V	II	2688.757	2687.960	260	3.	478	
V	II	2658.085	2657.295	10	88.	478		V	II	2689.514	2688.717	100	3.	478	
V	II	2658.76	2657.97	1		478		V	II	2690.680	2689.883	100	3.	478	
V	II	2659.28	2658.49	7	213.	478		V	II	2691.050	2690.252	150	3.	478	
V	II	2659.76	2658.97	30	88.	478		V	II	2691.589	2690.792	200	3.	478	
V	II	2660.39	2659.60	25	112.	478		V	II	2693.80	2693.00	5		478	
V	II	2662.033	2661.243	3		478		V	II	2695.27	2694.47	5	49	478	
V	II	2662.26	2661.47	30		478		V	II	2695.45	2694.65	10		478	
V	II	2664.04	2663.25	230	213.	478		V	II	2695.54	2694.74	20	2	478	
V	II	2664.317	2663.526	4	207.	478		V	II	2697.31	2696.51	20		478	
V	II	2664.628	2663.837	2		478		V	II	2698.000	2697.201	10	207	478	
V	II	2666.069	2665.277	3	14.	478		V	II	2700.43	2699.63	4		478	
V	II	2666.281	2665.490	2		478		V	II	2701.00	2700.20	1		478	
V	II	2667.29	2666.50	1		478		V	II	2701.744	2700.944	260	1.	478	
V	II	2667.58	2666.79	10	213.	478		V	II	2702.336	2701.536	10	2.	478	
V	II	2668.324	2667.532	4	67.	478		V	II	2702.985	2702.185	200	2.	478	
V	II	2668.80	2668.01	10	199.	478		V	II	2703.95	2703.15	3	67.	478	
V	II	2669.387	2668.595	4	14.	478		V	II	2706.021	2705.221	40	2.	478	
V	II	2671.030	2670.237	40	111.	478		V	II	2706.97	2706.17	200	1.	478	
V	II	2672.798	2672.005	150	3.	478		V	II	2707.50	2706.70	150	2.	478	
V	II	2674.04	2673.25	50		478		V	II	2708.66	2707.86	100	2.	478	
V	II	2674.749	2673.955	4	14.	478		V	II	2709.71	2708.91	1		478	
V	II	2675.07	2674.28	3		478		V	II	2709.90	2709.10	6		478	
V	II	2675.96	2675.17	2		478		V	II	2710.97	2710.17	15	48.	478	
V	II	2676.84	2676.05	9	213.	478		V	II	2712.543	2711.740	100	2.	478	
V	II	2677.12	2676.33	7	213.	478		V	II	2713.01	2712.21	30		478	
V	II	2677.79	2677.00	1		478		V	II	2713.61	2712.81	7		478	
V	II	2678.599	2677.804	150	3.	478		V	II	2713.853	2713.050	40	2.	478	
V	II	2679.367	2678.572	100	3.	478		V	II	2715.008	2714.205	50	2.	478	
V	II	2680.122	2679.327	200	3.	478		V	II	2715.22	2714.42	10		478	
V	II	2681.265	2680.470	8	111.	478		V	II	2716.480	2715.676	180	1.	478	
V	II	2681.617	2680.822	1		478		V	II	2718.268	2717.464	5	121.	478	
V	II	2682.09	2681.29	1		478		V	II	2721.57	2720.77	2		478	
V	II	2683.331	2682.535	6	14.	478		V	II	2722.900	2722.095	1		478	
V	II	2683.670	2682.875	100	3.	478		V	II	2723.063	2722.258	3	47.	478	
V	II	2683.89	2683.09	100	3.	478		V	II	2724.023	2723.218	20	1.	478	
V	II	2685.58	2684.78	15		478		V	II	2724.260	2723.455	10		478	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2725.21	2724.40	2		478	V	II	2760.41	2759.60	15	218.	478
V	II	2725.42	2724.61	5		478	V	II	2760.936	2760.122	40	77.	478
V	II	2727.350	2726.544	40	47.	478	V	II	2761.524	2760.710	60	149.	478
V	II	2728.735	2727.929	6	47.	478	V	II	2762.15	2761.34	3		782
V	II	2729.451	2728.644	150	1.	478	V	II	2763.228	2762.479	50		782
V	II	2730.45	2729.64	1		478	V	II	2763.529	2762.714	3	46.	478
V	II	2731.41	2730.60	2		478	V	II	2765.10	2764.28	4		478
V	II	2731.93	2731.12	4		478	V	II	2766.491	2765.676	150	218.	478
V	II	2732.98	2732.17	10		478	V	II	2767.276	2766.460	60	77.	478
V	II	2733.73	2732.92	5	1.	478	V	II	2767.92	2767.10	30	218.	478
V	II	2733.81	2733.00	5		478	V	II	2768.966	2768.150	15	64.	478
V	II	2734.714	2733.906	25	1.	478	V	II	2769.382	2768.566	100	46.	478
V	II	2735.08	2734.27	15		478	V	II	2770.547	2769.731	20	134.	478
V	II	2736.93	2736.12	4	218.	478	V	II	2771.81	2770.99	4	63.	478
V	II	2737.50	2736.69	10	87.	478	V	II	2772.23	2771.41	40	219.	478
V	II	2739.99	2739.18	8		478	V	II	2772.83	2772.01	60	218.	478
V	II	2740.524	2739.715	100	1.	478	V	II	2775.10	2774.28	100	46.	478
V	II	2741.79	2740.98	7	218.	478	V	II	2775.536	2774.718	60	133.	478
V	II	2742.372	2741.563	4	1.	478	V	II	2775.793	2774.976	30	63.	478
V	II	2743.24	2742.43	25	1.	478	V	II	2776.586	2775.700	70	148.	478
V	II	2743.480	2742.670	30	13.	478	V	II	2777.06	2776.24	6	144.	478
V	II	2744.578	2743.768	20	13.	478	V	II	2777.322	2776.502	1		782
V	II	2745.35	2744.54	4	13.	478	V	II	2778.567	2777.748	80	77.	478
V	II	2745.61	2744.80	1		478	V	II	2778.98	2778.16	2		478
V	II	2746.703	2745.893	6	66.	478	V	II	2779.42	2778.60	80		478
V	II	2748.126	2747.313	15		782	V	II	2780.91	2780.09	5	63.	478
V	II	2748.273	2747.462	80	135.	478	V	II	2780.975	2780.195	15		782
V	II	2750.29	2749.48	8	218.	478	V	II	2782.30	2781.48	100	219.	478
V	II	2750.78	2749.97	7	218.	478	V	II	2783.38	2782.56	5		478
V	II	2751.10	2750.29	8	198.	478	V	II	2783.77	2782.95	6	191.	478
V	II	2752.60	2751.79	10		478	V	II	2784.76	2783.94	30		478
V	II	2752.92	2752.11	15		478	V	II	2785.07	2784.25	60		478
V	II	2754.219	2753.407	150	150.	478	V	II	2786.65	2785.83	5	223.	478
V	II	2755.86	2755.05	10		478	V	II	2787.82	2787.00	10	219.	478
V	II	2757.19	2756.38	4	152.	478	V	II	2788.14	2787.32	2		478
V	II	2757.39	2756.58	20	218.	478	V	II	2788.77	2787.95	20		478
V	II	2759.34	2758.53	9	13.	478	V	II	2789.48	2788.66	3		478
V	II	2759.623	2758.810	15	134.	478	V	II	2792.32	2791.50	7	36.	478
V	II	2759.89	2759.08	2		478	V	II	2792.45	2791.63	10		478
V	II	2760.03	2759.22	1	46.	478	V	II	2793.27	2792.45	6	217.	478

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	II	2795.11	2794.29	5	223.	478		V	II	2823.27	2822.44	80	222.	478	
V	II	2795.65	2794.83	15		478		V	II	2825.273	2824.444	4	35.	478	
V	II	2796.21	2795.39	3	217.	478		V	II	2825.85	2825.02	5	221.	478	
V	II	2796.365	2795.541	3		782		V	II	2826.69	2825.86	50	221.	478	
V	II	2796.54	2795.72	4	223.	478		V	II	2827.72	2826.89	5		478	
V	II	2797.840	2797.017	60	100.	478		V	II	2831.233	2830.402	40	155.	478	
V	II	2798.618	2797.795	70	100.	478		V	II	2831.53	2830.70	3	221.	478	
V	II	2799.578	2798.755	80	100.	478		V	II	2831.735	2830.902	15		782	
V	II	2800.274	2799.451	100	62.	478		V	II	2831.80	2830.97	3	222.	478	
V	II	2800.87	2800.05	4	220.	478		V	II	2832.43	2831.60	10	221.	478	
V	II	2801.77	2800.95	20	224.	478		V	II	2835.38	2834.55	30	222.	478	
V	II	2803.620	2802.796	100	62.	478		V	II	2836.18	2835.35	6	222.	478	
V	II	2804.253	2803.469	150	62.	478		V	II	2836.30	2835.47	4	160.	478	
V	II	2805.267	2804.443	4	143.	478		V	II	2837.360	2836.527	50	61.	478	
V	II	2806.015	2805.188	0		782		V	II	2838.886	2838.053	10	35.	478	
V	II	2806.368	2805.544	30	120.	478		V	II	2839.364	2838.531	4	160.	478	
V	II	2807.369	2806.544	4	100.	478		V	II	2840.93	2840.10	10	36.	478	
V	II	2807.61	2806.79	3		478		V	II	2841.427	2840.593	6	36.	478	
V	II	2808.848	2808.023	4	62.	478		V	II	2841.658	2840.825	3	178.	478	
V	II	2809.063	2808.237	25	120.	478		V	II	2841.872	2841.039	50	61.	478	
V	II	2809.527	2808.701	4	36.	478		V	II	2842.876	2842.043	2	35.	478	
V	II	2810.010	2809.184	1	36.	478		V	II	2843.121	2842.287	6		478	
V	II	2810.339	2809.513	15	143.	478		V	II	2843.533	2842.699	4	85.	478	
V	II	2810.984	2810.158	60	120.	478		V	II	2844.65	2843.82	9	221.	478	
V	II	2811.098	2810.272	100	120.	478		V	II	2845.05	2844.22	4	221.	478	
V	II	2812.424	2811.597	7	143.	478		V	II	2845.667	2844.833	3	169.	478	
V	II	2812.808	2811.982	5	143.	478		V	II	2846.076	2845.241	50	160.	478	
V	II	2812.990	2812.164	6	143.	478		V	II	2847.12	2846.29	1		478	
V	II	2813.54	2812.71	3		478		V	II	2848.408	2847.573	100	159.	478	
V	II	2814.76	2813.93	0		782		V	II	2849.890	2849.055	40	61.	478	
V	II	2815.730	2814.903	15	120.	478		V	II	2851.312	2850.477	1	35.	478	
V	II	2815.859	2815.032	5	36.	478		V	II	2851.520	2850.685	25	184.	478	
V	II	2816.20	2815.37	0		782		V	II	2851.601	2850.765	20	85.	478	
V	II	2816.375	2815.547	3	155.	478		V	II	2852.095	2851.260	15	159.	478	
V	II	2816.334	2817.506	60	120.	478		V	II	2853.376	2852.540	30	169.	478	
V	II	2818.68	2817.85	0		782		V	II	2854.597	2853.761	4	132.	478	
V	II	2819.35	2818.52	5	220.	478		V	II	2855.172	2854.335	120	159.	478	
V	II	2820.272	2819.444	20	120.	478		V	II	2856.135	2855.298	40	83.	478	
V	II	2821.952	2821.124	15	86.	478		V	II	2858.28	2857.44	1		478	
V	II	2822.98	2822.15	20		478		V	II	2862.239	2861.401	5	84.	478	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	II	2863.149	2862.310	20	159.	478	V	II	2896.455	2895.609	4	167.	478
V	II	2863.75	2862.91	1		478	V	II	2897.045	2896.198	100	11.	478
V	II	2864.63	2863.79	2		478	V	II	2897.717	2896.870	2		478
V	II	2865.356	2864.517	30	158.	478	V	II	2898.746	2897.899	20	197.	478
V	II	2869.971	2869.131	150	159.	478	V	II	2900.014	2899.165	50		782
V	II	2870.798	2869.957	10	12.	478	V	II	2900.784	2899.936	4	119.	478
V	II	2870.951	2870.111	9	35.	478	V	II	2903.39	2902.54	1		478
V	II	2872.304	2871.463	4	151.	478	V	II	2903.917	2903.068	100	11.	478
V	II	2872.384	2871.543	3	131.	478	V	II	2904.397	2903.548	3	119.	478
V	II	2873.647	2872.806	1		478	V	II	2905.834	2904.985	15	119.	478
V	II	2874.022	2873.180	30	142.	478	V	II	2906.156	2905.307	1		478
V	II	2875.047	2874.205	5	35.	478	V	II	2906.458	2905.609	15	119.	478
V	II	2876.529	2875.687	30	12.	478	V	II	2907.257	2906.448	150	11.	478
V	II	2877.781	2876.939	9	82.	478	V	II	2908.307	2907.457	120	10.	478
V	II	2878.531	2877.689	60	82.	478	V	II	2909.29	2908.44	20	154.	478
V	II	2878.871	2878.028	7	142.	478	V	II	2909.660	2908.810	260	12.	478
V	II	2879.141	2878.299	3	168.	478	V	II	2910.857	2910.007	140	11.	478
V	II	2879.856	2879.013	2	154.	478	V	II	2911.230	2910.380	150	11.	478
V	II	2880.000	2879.158	40	12.	478	V	II	2911.901	2911.050	160	10.	478
V	II	2880.81	2879.97		82.	488	V	II	2912.505	2911.654	7	119.	478
V	II	2880.869	2880.026	150	12.	478	V	II	2913.304	2912.451	20		782
V	II	2881.645	2880.802	15	142.	478	V	II	2913.89	2913.04	3		478
V	II	2883.337	2882.493	120	12.	478	V	II	2914.567	2913.716	2	119.	478
V	II	2884.908	2884.064	6	197.	478	V	II	2915.149	2914.298	40	118.	478
V	II	2885.620	2884.776	150	12.	478	V	II	2915.72	2914.87	10	81.	478
V	II	2887.213	2886.367	1		782	V	II	2916.181	2915.330	30	166.	478
V	II	2887.811	2886.967	10	154.	478	V	II	2916.727	2915.875	40	197.	478
V	II	2888.002	2887.158	8	154.	478	V	II	2918.082	2917.230	7	81.	478
V	II	2888.59	2887.75	1		478	V	II	2918.217	2917.365	50	11.	478
V	II	2889.089	2888.244	80	82.	478	V	II	2919.06	2918.21	15	204.	478
V	II	2889.62	2888.77	15		782	V	II	2920.511	2919.656	20		782
V	II	2890.459	2889.614	100	12.	478	V	II	2920.841	2919.989	50	11.	478
V	II	2890.989	2890.144	7	142.	478	V	II	2921.230	2920.377	100	10.	478
V	II	2891.398	2890.553	5	142.	478	V	II	2924.194	2923.340	20	81.	478
V	II	2892.482	2891.636	150	12.	478	V	II	2924.870	2924.017	260	10.	478
V	II	2893.280	2892.434	150	12.	478	V	II	2925.486	2924.633	230	10.	478
V	II	2893.496	2892.650	200	12.	478	V	II	2926.142	2925.288	15	81.	478
V	II	2894.160	2893.314	230	12.	478	V	II	2926.36	2925.51	3		478
V	II	2895.679	2894.833	3		478	V	II	2927.20	2926.35	10	204.	478
V	II	2895.949	2895.100	10		782	V	II	2927.295	2926.442	40	177.	478

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	2929.871	2929.017	4	204.	478		V	II	2968.88	2968.02	7		478	
V	II	2930.987	2930.132	25	81.	478		V	II	2969.238	2968.373	200	28.	478	
V	II	2931.653	2930.798	150	10.	478		V	II	2970.711	2969.846	5	153.	478	
V	II	2932.479	2931.624	20	166.	478		V	II	2971.291	2970.427	6		478	
V	II	2932.715	2931.859	10	118.	478		V	II	2972.436	2971.571	8	141.	478	
V	II	2933.178	2932.323	60	166.	478		V	II	2972.863	2971.998	4	141.	478	
V	II	2934.769	2933.833	15	81.	478		V	II	2973.128	2972.263	80	87.	478	
V	II	2935.250	2934.394	60	10.	478		V	II	2974.841	2973.975	40	218.	478	
V	II	2937.887	2937.030	15	118.	478		V	II	2976.516	2975.650	50	28.	478	
V	II	2939.116	2938.259	20	81.	478		V	II	2977.063	2976.197	60	28.	478	
V	II	2942.08	2941.22		204.	488	P	V	II	2977.17	2976.30	5		782	
V	II	2942.230	2941.372	200	10.	478		V	II	2977.383	2976.517	100	28.	478	
V	II	2942.343	2941.485	10	10.	478		V	II	2977.59	2976.72		153.	488	
V	II	2942.966	2942.106	0		782		V	II	2979.092	2978.226	20	87.	478	
V	II	2943.23	2942.37	5	118.	478		V	II	2979.969	2979.102	5	44.	478	
V	II	2944.489	2943.631	3	204.	478		V	II	2980.34	2979.47	4		478	
V	II	2944.979	2944.118	2		782		V	II	2981.35	2980.48	0		782	
V	II	2945.427	2944.568	230	10.	478		V	II	2982.068	2981.200	70	87.	478	
V	II	2947.198	2946.337	0		782		V	II	2982.792	2981.924	15	153.	478	
V	II	2947.581	2946.720	1		782		V	II	2983.19	2982.32	0		782	
V	II	2948.936	2948.076	60	196.	478		V	II	2983.62	2982.75	40	28.	478	
V	II	2949.69	2948.83	2		478		V	II	2983.877	2983.009	10	60.	478	
V	II	2950.032	2949.172	40	183.	478		V	II	2984.426	2983.558	80	28.	478	
V	II	2950.974	2950.112	0		782		V	II	2986.052	2985.184	60	218.	478	
V	II	2951.204	2950.344	80	10.	478		V	II	2986.79	2985.92	2		782	
V	II	2952.42	2951.56	8		478		V	II	2988.562	2987.690	0		782	
V	II	2952.93	2952.07	150	10.	478		V	II	2988.896	2988.027	80	27.	478	
V	II	2954.31	2953.45	1		478		V	II	2990.176	2989.306	15	87.	478	
V	II	2956.447	2955.584	30	196.	478		V	II	2990.464	2989.594	40	28.	478	
V	II	2957.506	2956.645	2	196.	478		V	II	2990.61	2989.74	10	87.	478	
V	II	2958.381	2957.520	100	10.	478		V	II	2992.607	2991.737	3		478	
V	II	2959.47	2958.61	20	196.	478		V	II	2993.248	2992.378	2	153.	478	
V	II	2960.41	2959.55	1	153.	478		V	II	2993.86	2992.99	4		478	
V	II	2961.640	2960.777	6	130.	478		V	II	2994.92	2994.05	1		478	
V	II	2962.877	2962.014	5	196.	478		V	II	2995.411	2994.540	60	218.	478	
V	II	2964.113	2963.249	9	154	478		V	II	2995.993	2995.119	5		782	
V	II	2964.72	2963.86	4		478		V	II	2996.32	2995.44	0		782	
V	II	2966.431	2965.565	1		782		V	II	2996.870	2995.999	60	27.	478	
V	II	2967.932	2967.066	20		782		V	II	2997.57	2996.70	3	28.	478	
V	II	2968.409	2967.545	5	60.	478		V	II	2998.816	2997.945	6	141.	478	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	II	3002.075	3001.203	200	27.	478		V	II	3042.30	3041.42	60	40.	478	
V	II	3002.627	3001.754	30	141.	478		V	II	3043.15	3042.27	80	40.	478	
V	II	3002.80	3001.93	2	43.	478		V	II	3043.79	3042.90	1		782	
V	II	3004.334	3003.461	80	27.	478		V	II	3044.42	3043.54	40	40.	478	
V	II	3006.558	3005.682	8		782		V	II	3049.097	3048.214	200	123.	478	
V	II	3006.687	3005.813	30	86.	478		V	II	3049.53	3048.65	4	67.	478	
V	II	3007.376	3006.502	20	141.	478		V	II	3049.775	3048.891	70	40.	478	
V	II	3007.909	3007.035	1	141.	478		V	II	3051.620	3050.735	15	66.	478	
V	II	3008.170	3007.296	15	27.	478		V	II	3052.193	3051.308	3	228.	478	
V	II	3009.382	3008.508	15	141.	478		V	II	3054.28	3053.39	200	34.	478	
V	II	3009.485	3008.610	70	26.	478		V	II	3054.524	3053.637	6		782	
V	II	3012.133	3011.258	1		478		V	II	3054.779	3053.894	80	40.	478	
V	II	3012.853	3012.020	30	43.	478		V	II	3055.13	3054.24	7	67.	478	
V	II	3013.977	3013.102	80	26.	478		V	II	3056.297	3055.409	2		782	
V	II	3015.698	3014.822	100	27.	478		V	II	3056.828	3055.942	7	123.	478	
V	II	3016.86	3015.98	10	42.	478		V	II	3057.97	3057.08	2	95.	478	
V	II	3017.02	3016.14	15	26.	478		V	II	3060.081	3059.191	10		782	
V	II	3017.652	3016.775	120	27.	478		V	II	3061.904	3061.014	2		782	
V	II	3019.84	3018.96	3		478		V	II	3062.128	3061.238	5		782	
V	II	3019.97	3019.09	3	86.	478		V	II	3063.066	3062.178	3	113.	478	
V	II	3021.13	3020.25	4		478		V	II	3063.589	3062.702	20	34.	478	
V	II	3021.53	3020.65	6	26.	478		V	II	3064.135	3063.247	200	123.	478	
V	II	3023.024	3022.146	4	86.	478		V	II	3066.50	3065.61	50	112.	478	
V	II	3023.45	3022.57	40	26.	478		V	II	3067.560	3066.669	5		782	
V	II	3024.760	3023.882	20	41.	478		V	II	3067.69	3066.80	4	123.	478	
V	II	3025.860	3024.981	50	85.	478		V	II	3067.993	3067.104	200	34	478	
V	II	3026.56	3025.68	1	75.	478		V	II	3069.978	3069.085	8		782	
V	II	3028.479	3027.600	15	85.	478		V	II	3071.02	3070.12	25	228.	478	
V	II	3028.922	3028.042	50	85.	478		V	II	3071.747	3070.855	4		782	
V	II	3030.44	3029.56	7	26.	478		V	II	3072.66	3071.77	2	250.	478	
V	II	3033.067	3032.187	3	75.	478		V	II	3075.55	3074.66	12	112.	478	
V	II	3033.215	3032.332	0		782		V	II	3075.934	3075.043	3	228.	478	
V	II	3034.328	3033.445	200	123.	478		V	II	3076.365	3075.474	2	67.	478	
V	II	3034.702	3033.821	260	34.	478		V	II	3076.47	3075.58	5	228.	478	
V	II	3035.29	3034.41	4		478		V	II	3076.907	3076.016	25	34.	478	
V	II	3036.02	3035.14	3	245.	478		V	II	3079.56	3078.66	3		782	
V	II	3036.95	3036.07	2	40.	478		V	II	3079.839	3078.948	5	66.	478	
V	II	3038.88	3038.00	2	246.	478		V	II	3080.64	3079.75	1	113.	478	
V	II	3039.402	3038.520	30	96.	478		V	II	3081.90	3081.01	20	112.	478	
V	II	3040.649	3039.767	2	153.	478		V	II	3082.147	3081.254	25	66.	478	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	II	3082.19	3081.30	10	164.	478		V	II	3117.68	3116.78	40	237.	478	
V	II	3083.31	3082.41	15		782		V	II	3119.277	3118.376	550	1.	478	
V	II	3083.416	3082.524	40	39.	478		V	II	3120.22	3119.32	4	110.	478	
V	II	3084.101	3083.208	40	112.	478		V	II	3121.628	3120.726	50	138.	478	
V	II	3086.36	3085.47	1	34.	478		V	II	3122.040	3121.138	80	1.	478	
V	II	3087.104	3086.210	10	66.	478		V	II	3122.728	3121.823	5		782	
V	II	3087.400	3086.507	30	39.	478		V	II	3123.790	3122.887	100	173.	478	
V	II	3089.015	3088.118	15		782		V	II	3125.213	3124.307	10		782	
V	II	3089.116	3088.219	20		782		V	II	3125.91	3125.01	20	84.	478	
V	II	3089.482	3088.585	20		782		V	II	3126.185	3125.282	400	1.	478	
V	II	3090.527	3089.633	4	112.	478		V	II	3126.621	3125.715	15		782	
V	II	3094.003	3093.108	1000	1.	478		V	II	3127.119	3126.215	150	1.	478	
V	II	3094.698	3093.800	3		782		V	II	3127.65	3126.79	2	122.	478	
V	II	3095.092	3094.196	100	39.	478		V	II	3128.043	3127.136	12		782	
V	II	3097.152	3096.253	4		782		V	II	3129.192	3128.288	10	84.	478	
V	II	3098.05	3097.15	2		782		V	II	3129.590	3128.686	20	83.	478	
V	II	3098.53	3097.63	2		782		V	II	3130.390	3129.484	10		782	
V	II	3101.160	3100.260	10		782		V	II	3131.166	3130.262	100	1.	478	
V	II	3101.835	3100.938	100	39.	478		V	II	3133.497	3132.589	30		782	
V	II	3103.192	3102.295	925	1.	478		V	II	3133.698	3132.793	3	122.	478	
V	II	3105.419	3104.518	8		782		V	II	3134.234	3133.329	150	1.	478	
V	II	3105.804	3104.906	25	39.	478		V	II	3134.520	3133.612	6		782	
V	II	3106.264	3105.363	15		782		V	II	3135.833	3134.928	200	122.	478	
V	II	3106.399	3105.498	8		782		V	II	3137.409	3136.503	160	122.	478	
V	II	3106.871	3105.973	5	140.	478		V	II	3138.799	3137.890	15		782	
V	II	3107.728	3106.829	3	139.	478		V	II	3138.96	3138.05	20	205.	478	
V	II	3108.861	3107.959	8		782		V	II	3140.639	3139.733	160	122.	478	
V	II	3109.603	3108.704	30	39.	478		V	II	3141.98	3141.07	2	205.	478	
V	II	3109.81	3108.91	2		782		V	II	3142.393	3141.486	40	152.	478	
V	II	3110.274	3109.375	20	186.	478		V	II	3142.905	3141.995	3		782	
V	II	3110.676	3109.774	12		782		V	II	3143.090	3142.183	20	172.	478	
V	II	3110.97	3110.07	3	139.	478		V	II	3143.391	3142.484	150	52.	478	
V	II	3111.607	3110.708	700	1.	478		V	II	3144.385	3143.477	15	122.	478	
V	II	3112.84	3111.94	0		782		V	II	3145.608	3144.700	20	122.	478	
V	II	3114.460	3113.560	100	174.	478		V	II	3145.985	3145.074	2		782	
V	II	3114.753	3113.850	6		782		V	II	3146.245	3145.337	30	1.	478	
V	II	3116.06	3115.16	2	111.	478		V	II	3146.776	3145.865	2		782	
V	II	3116.92	3116.02	3	139.	478		V	II	3146.880	3145.971	20	1.	478	
V	II	3117.01	3116.11	2	139.	478		V	II	3147.134	3146.226	40	138.	478	
V	II	3117.52	3116.61	1		782		V	II	3147.727	3146.818	10	138.	478	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLT	REFERENCE	NOTES
V	II	3149.230	3148.318	2		782	V	II	3189.02	3188.10	30	49.	478
V	II	3149.647	3148.738	15	249.	478	V	II	3189.441	3188.522	260	8.	478
V	II	3152.228	3151.319	100	138.	478	V	II	3190.68	3189.76	3	83.	478
V	II	3153.785	3152.872	2		782	V	II	3191.606	3190.686	360	8.	478
V	II	3155.71	3154.80	1	249.	478	V	II	3193.619	3192.699	15	83.	478
V	II	3156.320	3155.409	60	51.	478	V	II	3194.120	3193.200	20	83.	478
V	II	3158.61	3157.70	3		478	V	II	3194.69	3193.97	10	49.	478
V	II	3158.811	3157.900	40	50.	478	V	II	3196.42	3195.50	15		782
V	II	3160.277	3159.365	20	83.	478	V	II	3197.495	3196.574	20	62.	478
V	II	3161.693	3160.781	15	138.	478	V	II	3198.495	3197.574	7	150.	478
V	II	3162.225	3161.313	30	151.	478	V	II	3202.50	3201.58	15		782
V	II	3163.280	3162.367	10		478	V	II	3203.634	3202.711	2	62.	478
V	II	3163.627	3162.714	30	83.	478	V	II	3207.08	3206.16	15		782
V	II	3163.936	3163.024	30	84.	478	V	II	3209.269	3208.345	100	8.	478
V	II	3164.103	3163.187	4		782	V	II	3215.676	3214.750	120	8.	478
V	II	3164.67	3163.76	10	249.	478	V	II	3218.047	3217.121	310	38.	478
V	II	3165.73	3164.82	40	8.	478	V	II	3222.308	3221.380	2	109.	478
V	II	3166.80	3165.89	30	84.	478	V	II	3227.852	3226.924	40	185.	478
V	II	3167.30	3166.39	8	84.	478	V	II	3231.849	3230.919	4	48.	478
V	II	3168.157	3167.240	10		782	V	II	3232.882	3231.952	80	61.	478
V	II	3168.334	3167.420	40	217.	478	V	II	3234.476	3233.546	40	61.	478
V	II	3168.40	3167.49	30	236.	478	V	II	3234.702	3233.772	80	61.	478
V	II	3168.808	3167.891	3		782	V	II	3235.436	3234.504	10	61.	478
V	II	3169.041	3168.127	40	8.	478	V	II	3238.808	3237.876	290	38.	478
V	II	3170.12	3169.21	2	65.	478	V	II	3240.765	3239.833	8	61.	478
V	II	3171.122	3170.208	8	217.	478	V	II	3241.717	3240.785	1	61.	478
V	II	3172.654	3171.739	9	217.	478	V	II	3248.842	3247.908	4	109.	478
V	II	3173.145	3172.230	7	249.	478	V	II	3250.398	3249.464	4	82.	478
V	II	3174.992	3174.077	30	84.	478	V	II	3250.552	3249.617	40	38.	478
V	II	3175.127	3174.209	2		782	V	II	3251.709	3250.775	200	171.	478
V	II	3175.447	3174.531	60	217.	478	V	II	3252.804	3251.869	200	108.	478
V	II	3178.612	3177.696	6	217.	478	V	II	3255.709	3254.773	260	38.	478
V	II	3180.333	3179.416	8	217.	478	V	II	3257.012	3256.073	15		782
V	II	3180.949	3180.029	1		782	V	II	3258.829	3257.893	100	108.	478
V	II	3183.51	3182.59	20	217.	478	V	II	3260.620	3259.684	3	48.	478
V	II	3183.591	3182.674	20	150.	478	V	II	3262.74	3261.80	5	109.	478
V	II	3185.162	3184.241	5		782	V	II	3264.27	3263.33	20	38.	478
V	II	3187.02	3186.10	1	64.	478	V	II	3264.988	3264.047	15		782
V	II	3187.78	3186.86	10	63.	478	V	II	3266.832	3265.893	100	74.	478
V	II	3188.635	3187.717	200	8.	478	V	II	3267.85	3266.91	1	137.	478

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	II	3268.648	3267.709	550	7.	478	V	III	2196.88	2196.20	10	12.	791
V	II	3269.88	3268.94	2		478	V	III	2205.00	2204.31	100	12.	791
V	II	3270.229	3269.287	30		782	V	III	2206.77	2206.08	3		325
V	II	3270.505	3269.563	30		782	V	III	2206.96	2206.27	10	12.	791
V	II	3271.055	3270.115	10	94.	478	V	III	2209.88	2209.19	40	12.	791
V	II	3271.598	3270.656	2		782	V	III	2216.55	2215.86	200	12.	791
V	II	3272.064	3271.124	620	7.	478	V	III	2218.06	2217.37	150	12.	791
V	II	3273.675	3272.732	30		782	V	III	2218.49	2217.80	125	12.	791
V	II	3274.643	3273.700	2		782	V	III	2219.04	2218.35	150	12.	791
V	II	3275.44	3274.50	10	163.	478	V	III	2221.93	2221.24	5		791
V	II	3276.199	3275.254	3		782	V	III	2230.24	2229.55	75		791
V	II	3277.06	3276.12	700	7.	478	V	III	2233.46	2232.77	350	12.	791
V	II	3278.023	3277.082	10	137.	478	V	III	2237.42	2236.73	15		325
V	II	3278.390	3277.448	15	194.	478	V	III	2241.13	2240.44	30		791
V	II	3278.65	3277.71	30	137.	478	V	III	2242.08	2241.39	125		791
V	II	3280.786	3279.844	260	73.	478	V	III	2243.52	2242.82	5		325
V	II	3281.659	3280.714	8		782	V	III	2249.60	2248.90	40		791
V	II	3282.062	3281.120	40	136.	478	V	III	2252.68	2251.99	15		325
V	II	3282.697	3281.755	10	136.	478	V	III	2261.37	2260.67	10		791
V	II	3283.476	3282.534	150	72.	478	V	III	2261.53	2260.83	40		325
V	II	3285.624	3284.678	3		782	V	III	2261.86	2261.16	3		325
V	II	3285.780	3284.834	80		782	V	III	2264.16	2263.46	2		325
V	II	3285.965	3285.022	50	108.	478	V	III	2265.34	2264.64	1		325
V	II	3286.615	3285.672	3	162.	478	V	III	2273.38	2272.68	1		325
V	II	3288.02	3287.08	6		782	V	III	2273.66	2272.96	10		325
V	II	3289.268	3288.324	20	89.	478	V	III	2275.77	2275.07	20		791
V	II	3292.221	3291.273	4		782	V	III	2275.92	2275.22	20		325
V	II	3309.081	3308.129	10		782	V	III	2280.66	2279.96	10		325
V	II	3311.283	3310.331	5		782	V	III	2284.05	2283.34	40		325
V	II	3321.039	3320.084	1		782	V	III	2284.64	2283.93	8		325
V	II	3413.716	3412.737	1		782	V	III	2288.63	2287.93	30		325
V	II	3431.118	3430.134	4		782	V	III	2289.21	2288.51	30		791
V	II	3468.32	3467.33	2		782	V	III	2290.36	2289.66	8		325
V	II	3514.878	3513.877	15		782	V	III	2296.89	2296.18	15		791
V	II	3518.516	3517.510	10		782	V	III	2314.81	2314.10	250	11.	791
V	III	2032.01	2031.35	25		325							
V	III	2037.94	2037.29	55		325							
V	III	2102.18	2101.51	2		325							
V	III	2102.88	2102.22	3		325							
V	III	2188.46	2187.78	15		325							

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	III	2316.81	2316.10	1		325		V	III	2428.43	2427.69	10	10.	791	
V	III	2319.65	2318.94	200	11.	791		V	III	2440.89	2440.16	1		325	
V	III	2320.54	2319.83	20		325		V	III	2441.66	2440.92	0		325	
V	III	2325.78	2325.07	200	11.	791		V	III	2447.54	2446.80	50		325	
V	III	2331.09	2330.38	500	11.	791		V	III	2461.04	2460.29	20		325	
V	III	2332.39	2331.68	375	11.	791		V	III	2491.91	2491.16	30		325	
V	III	2332.67	2331.96	2		325		V	III	2494.41	2493.65	20		325	
V	III	2334.87	2334.16	375	11.	791		V	III	2504.43	2503.67	0		325	
V	III	2335.67	2334.96	10		325		V	III	2505.45	2504.69	2		325	
V	III	2337.80	2337.08	375	11.	791		V	III	2513.47	2512.72	0		325	
V	III	2338.95	2338.23	2		325		V	III	2517.65	2516.89	20		325	
V	III	2339.68	2338.96	2		325		V	III	2524.16	2523.40	25	14.	791	
V	III	2342.84	2342.12	20		325		V	III	2534.07	2533.30	40		325	
V	III	2347.00	2346.28	150	11.	791		V	III	2547.18	2546.41	15		325	
V	III	2347.57	2346.85	2		325		V	III	2548.98	2548.22	750	14.	791	
V	III	2347.78	2347.06	150	11.	791		V	III	2555.00	2554.24	800	14.	791	
V	III	2348.21	2347.49	5		325		V	III	2564.05	2563.28	40	13.	791	
V	III	2348.94	2348.22	150	11.	791		V	III	2565.81	2565.04	20		325	
V	III	2351.06	2350.34	1		325		V	III	2571.14	2570.37	5		325	
V	III	2359.42	2358.70	900	15.	791		V	III	2593.84	2593.07	800	13.	791	
V	III	2362.68	2361.96	15		325		V	III	2595.89	2595.12	850	13.	791	
V	III	2366.99	2366.27	900	15.	791		V	III	2606.26	2605.48	25		325	
V	III	2371.70	2371.04	1000	10.	791		V	III	2614.94	2614.16	1		325	
V	III	2374.75	2374.02	50		325		V	III	2620.25	2619.47	20		325	
V	III	2378.32	2377.62	10		325		V	III	2621.11	2620.33	25		325	
V	III	2383.18	2382.46	750	10.	791		V	III	2628.45	2627.67	20		325	
V	III	2386.35	2385.62	50	15.	791		V	III	2642.09	2641.30	15		325	
V	III	2391.68	2390.95	30		325		V	III	2649.80	2649.01	20		325	
V	III	2391.91	2391.18	10		325		V	III	2655.15	2654.36	60		325	
V	III	2394.27	2393.54	625	10.	791		V	III	2658.85	2658.06	1		325	
V	III	2397.25	2396.52	30		325		V	III	2659.41	2658.62	15		325	
V	III	2397.86	2397.13	20		325		V	III	2673.50	2672.71	1		325	
V	III	2398.73	2398.00	20		325		V	III	2693.06	2692.26	30		325	
V	III	2400.40	2399.67	375	10.	791		V	III	2740.99	2740.18	20		325	
V	III	2404.89	2404.16	500	10.	791		V	III	2755.96	2755.15	2		325	
V	III	2407.90	2407.17	400	10.	791		V	III	2815.15	2814.32	100		325	
V	III	2411.91	2411.17	30		325		V	III	2821.31	2820.48	0		325	
V	III	2414.62	2413.89	200	10.	791		V	III	2993.43	2992.56	2		325	
V	III	2423.93	2423.19	30		325		V	III	3009.99	3009.11	0		325	
V	III	2425.51	2424.77	10	10.	791		V	III	3033.80	3032.92	1		325	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
V	III	3043.945	3043.059	5		325		V	III	3107.41	3106.51	10		325	
V	III	3044.559	3043.673	5		325		V	III	3109.29	3108.39	30		325	
V	III	3045.82	3044.93	15		325		V	III	3112.573	3111.67	20		325	
V	III	3047.214	3046.328	10		325		V	III	3115.644	3114.741	10		325	
V	III	3049.978	3049.091	2		325		V	III	3118.08	3117.18	10		325	
V	III	3052.74	3051.85	1		325		V	III	3119.692	3118.780	20		325	
V	III	3053.234	3052.346	10		325		V	III	3119.858	3118.954	30		325	
V	III	3053.356	3052.468	10		325		V	III	3120.51	3119.61	2		325	
V	III	3059.82	3058.93	0		325		V	III	3121.31	3120.40	10		325	
V	III	3061.638	3060.748	5		325		V	III	3122.209	3121.304	10		325	
V	III	3063.732	3062.842	10		325		V	III	3122.386	3121.481	20		325	
V	III	3064.81	3063.92	2		325		V	III	3124.772	3123.867	3		325	
V	III	3067.41	3066.52	3		325		V	III	3127.400	3126.494	20		325	
V	III	3068.50	3067.61	1		325		V	III	3136.947	3136.038	20		325	
V	III	3072.760	3071.868	10		325		V	III	3144.991	3144.080	2		325	
V	III	3073.41	3072.50	5		325		V	III	3146.420	3145.510	2		325	
V	III	3076.705	3075.806	1		325		V	III	3162.72	3161.79	30		325	
V	III	3077.389	3076.495	100		325		V	III	3173.025	3172.107	20		325	
V	III	3077.619	3076.725	10		325		V	III	3177.046	3176.127	60		325	
V	III	3078.901	3078.007	20		325		V	III	3184.63	3183.71	50		325	
V	III	3079.694	3078.800	50		325		V	III	3185.983	3185.062	8		325	
V	III	3080.48	3079.59	8		325		V	III	3193.82	3192.90	40		325	
V	III	3080.919	3080.024	10		325		V	III	3199.232	3198.306	50		325	
V	III	3083.26	3082.36	50		325		V	III	3206.10	3205.18	10		325	
V	III	3084.255	3083.360	3		325		V	III	3208.74	3207.81	5		325	
V	III	3088.10	3087.20	100		325		V	III	3233.95	3233.02	50		325	
V	III	3088.38	3087.48	40		325		V	III	3239.316	3238.383	60		325	
V	III	3089.02	3088.12	100		325		V	III	3254.687	3253.749	20		325	
V	III	3091.735	3090.838	20		325		V	III	3267.59	3266.65	1		325	
V	III	3094.987	3094.089	100		325		V	III	3272.33	3271.38	0		325	
V	III	3096.25	3095.36	0		325		V	III	3279.690	3278.745	10		325	
V	III	3097.488	3096.589	80		325		V	III	3281.31	3280.36	2		325	
V	III	3098.75	3097.85	1		325		V	III	3285.31	3284.36	20		325	
V	III	3099.452	3098.553	60		325		V	III	3297.290	3296.341	20		325	
V	III	3100.67	3099.77	2		325		V	III	3304.399	3303.448	30		325	
V	III	3101.13	3100.23	5		325		V	III	3321.13	3320.17	1		325	
V	III	3101.40	3100.50	1		325		V	III	3328.819	3327.863	5		325	
V	III	3102.49	3101.59	100		325		V	III	3331.46	3330.49	0		325	
V	III	3106.40	3105.50	15		325		V	III	3332.27	3331.31	0		325	
V	III	3106.53	3105.63	15		325		V	III	3334.949	3333.990	8		325	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	IV	2341.421	2340.704	5	829		V	IV	2551.736	2550.971	2	829	
V	IV	2352.653	2351.934	5	829		V	IV	2557.682	2556.915	50	829	
V	IV	2354.359	2353.639	3	829		V	IV	2558.664	2557.897	15	829	
V	IV	2357.090	2356.369	10	829		V	IV	2570.582	2569.812	10	829	
V	IV	2357.345	2356.624	5	829		V	IV	2571.494	2570.724	80	829	
V	IV	2365.235	2364.512	1	829		V	IV	2585.409	2584.636	40	829	
V	IV	2379.015	2378.290	1	829		V	IV	2588.032	2587.258	10	829	
V	IV	2382.439	2381.712	10	829		V	IV	2593.522	2592.747	0	829	
V	IV	2385.456	2384.729	10	829		V	IV	2596.634	2595.858	20	829	
V	IV	2388.391	2387.663	3	829		V	IV	2597.538	2596.761	15	829	
V	IV	2396.180	2395.450	10	829		V	IV	2599.063	2598.287	30	829	
V	IV	2403.586	2402.855	5	829		V	IV	2600.760	2599.983	30	829	
V	IV	2413.990	2413.256	20	829		V	IV	2603.960	2603.213	10	829	
V	IV	2414.258	2413.524	5	829		V	IV	2608.412	2607.633	5	829	
V	IV	2417.286	2416.552	30	829		V	IV	2611.102	2610.323	10	829	
V	IV	2422.052	2421.317	50	829		V	IV	2614.940	2614.159	1	829	
V	IV	2432.622	2431.885	30	829		V	IV	2621.101	2620.320	25	829	
V	IV	2433.256	2432.518	10	829		V	IV	2624.266	2623.483	15	829	
V	IV	2434.269	2433.530	50	829		V	IV	2624.996	2624.213	50	829	
V	IV	2446.812	2446.071	30	829		V	IV	2628.874	2628.090	20	829	
V	IV	2447.543	2446.802	50	829		V	IV	2637.186	2636.401	30	829	
V	IV	2450.146	2449.404	40	829		V	IV	2637.722	2636.936	10	829	
V	IV	2450.464	2449.723	20	829		V	IV	2645.734	2644.946	8	829	
V	IV	2451.071	2450.329	20	829		V	IV	2646.329	2645.541	80	829	
V	IV	2451.611	2450.869	50	829		V	IV	2651.402	2650.613	8	829	
V	IV	2464.541	2463.796	10	829		V	IV	2656.198	2655.408	50	829	
V	IV	2465.465	2464.720	2	829		V	IV	2657.659	2656.868	50	829	
V	IV	2468.033	2467.287	20	829		V	IV	2668.631	2667.837	1	829	
V	IV	2478.868	2478.119	1	829		V	IV	2670.277	2669.483	10	829	
V	IV	2481.488	2480.739	30	829		V	IV	2704.735	2703.933	20	829	
V	IV	2495.103	2494.351	20	829		V	IV	2717.399	2716.594	20	829	
V	IV	2497.802	2497.049	10	829		V	IV	2719.527	2718.722	2	829	
V	IV	2507.724	2506.969	10	829		V	IV	2728.587	2727.780	1	829	
V	IV	2510.362	2509.606	5	829		V	IV	2741.354	2740.545	5	829	
V	IV	2512.134	2511.377	1	829		V	IV	2741.777	2740.966	5	829	
V	IV	2512.998	2512.242	0	829		V	IV	2744.335	2743.523	20	829	
V	IV	2520.561	2519.803	20	829		V	IV	2752.342	2751.528	10	829	
V	IV	2531.280	2530.520	2	829		V	IV	2764.676	2763.860	15	829	
V	IV	2533.743	2532.982	20	829		V	IV	2765.036	2764.219	15	829	
V	IV	2546.992	2546.228	20	829		V	IV	2824.962	2824.131	20	829	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	IV	2834.925	2834.089	5		829	
V	IV	2851.001	2850.160	2		829	
V	IV	2900.425	2899.575	2		829	
V	IV	3035.15	3034.27	10		829	
V	IV	3053.234	3052.346	10		829	
V	IV	3056.752	3055.864	5		829	
V	IV	3061.036	3060.146	5		829	
V	IV	3068.75	3067.85	0		829	
V	IV	3078.370	3077.476	15		829	
V	IV	3085.26	3084.36	1		829	
V	IV	3097.125	3096.226	2		829	
V	IV	3111.318	3110.416	30		829	
V	IV	3113.925	3113.022	25		829	
V	IV	3122.210	3121.304	10		829	
V	IV	3136.101	3135.192	20		829	
V	IV	3228.439	3227.507	15		829	
V	IV	3230.85	3229.92	0		829	
V	IV	3235.184	3234.251	20		829	
V	IV	3242.395	3241.460	40		829	
V	IV	3269.019	3268.077	15		829	
V	IV	3275.874	3274.931	5		829	
V	IV	3285.506	3284.560	50		829	
V	IV	3295.208	3294.259	40		829	
V	IV	3296.450	3295.501	10		829	
V	IV	3299.321	3298.371	20		829	
V	IV	3304.670	3303.719	5		829	
V	IV	3315.129	3314.175	2		829	
V	IV	3319.742	3318.788	5		829	
V	IV	3329.451	3328.527	30		829	
V	IV	3334.945	3333.986	15		829	
V	IV	3335.75	3334.79	60		829	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPL	REFERENCE	NOTES
V	V	2319.66	2318.95	200		929	
V	V	2327.463	2326.751	60		929	
V	V	2370.984	2370.261	30		929	
V	V	2374.183	2373.459	10		929	
V	V	2577.899	2577.130	200		929	
V	V	2606.301	2605.523	40		872	
V	V	2610.877	2610.098	100		872	
V	V	2621.3	2620.5			115	
V	V	2741.480	2740.670	100		929	
V	V	2775.816	2774.998	150		929	
V	V	2780.959	2780.140	30		929	
V	V	2928.1	2927.2			115	
V	V	2932.1	2931.2			115	
V	V	2950.995	2950.134	80		929	
V	V	2992.9	2992.0			115	
V	V	3005.1	3004.2			115	
V	V	3093.539	3092.64	40		929	
V	V	3140.85	3139.94	80		929	
V	V	3317.425	3316.470	100		929	
V	V	3364.484	3363.517	60		929	
V	V	3372.058	3371.089	10		929	
ZN	I	2041.58	2040.92	20		1014	U
ZN	I	2045.58	2044.92	2		1014	U
ZN	I	2049.08	2048.42	4		1014	U
ZN	I	2049.62	2048.96	2		1014	U
ZN	I	2053.5	2052.8	15		1014	U
ZN	I	2070.79	2070.13	50		1014	U
ZN	I	2079.743	2079.081	120		1014	U
ZN	I	2087.61	2086.95	200		1014	U
ZN	I	2087.997	2087.333	60		1014	U
ZN	I	2097.596	2096.930	80		1014	U
ZN	I	2105.092	2104.425	150		1014	U
ZN	I	2139.248	2138.575	200	1.	830	
ZN	I	2516.564	2515.807	2		830	
ZN	I	2530.85	2530.09	4	8.	488	
ZN	I	2543.08	2542.32	12	8.	488	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	I	2568.57	2567.80	12	8.	488	ZN	II	2012.590	2011.941	100		457
ZN	I	2570.641	2569.871	16	7.	830	ZN	II	2013.560	2012.911	15		154
ZN	I	2583.212	2582.440	14	7.	330	ZN	II	2017.098	2016.448	25		154
ZN	I	2583.259	2582.487	2	7.	830	ZN	II	2020.049	2019.398	25		154
ZN	I	2609.336	2608.558	60	7.	830	ZN	II	2022.002	2021.350	50		154
ZN	I	2609.418	2608.640	10	7.	830	ZN	II	2026.137	2025.486	300	1.	457
ZN	I	2671.324	2670.532	4	6.	830	ZN	II	2029.542	2028.890	35		154
ZN	I	2684.958	2684.162	12	6.	830	ZN	II	2030.116	2029.464	50		154
ZN	I	2713.292	2712.490	10	6.	830	ZN	II	2030.211	2029.559	20		154
ZN	I	2757.265	2756.452	120	5.	830	ZN	II	2034.222	2033.568	20		154
ZN	I	2771.682	2770.865	160	5.	830	ZN	II	2036.495	2035.841	10		154
ZN	I	2771.801	2770.984	50	5.	830	ZN	II	2037.479	2036.824	4		154
ZN	I	2801.693	2800.869	160	5.	830	ZN	II	2039.962	2039.309	60		457
ZN	I	2801.879	2801.056	30	5.	314	ZN	II	2044.367	2043.712	5		154
ZN	I	2801.991	2801.167	4	5.	314	ZN	II	2044.587	2043.932	30		154
ZN	I	3019.234	3018.355	60	5.	830	ZN	II	2057.471	2056.814	20		457
ZN	I	3036.661	3035.777	70	5.	830	ZN	II	2062.662	2062.003	300	1.	457
ZN	I	3072.954	3072.061	140	5.	830	ZN	II	2064.887	2064.228	200	4.	457
ZN	I	3076.789	3075.895	180	1.	830	ZN	II	2068.964	2068.305	50		154
ZN	I	3283.273	3282.328	200	4.	830	ZN	II	2077.038	2076.377	20		154
ZN	I	3303.535	3302.584	300	4.	830	ZN	II	2080.550	2079.887	50		154
ZN	I	3303.891	3302.941	250	4.	830	ZN	II	2081.078	2080.415	25		154
ZN	I	3345.977	3345.015	300	4.	314	ZN	II	2082.189	2081.528	4		154
ZN	I	3346.532	3345.570	200	4.	314	ZN	II	2085.478	2084.816	30		154
ZN	I	3346.898	3345.936	60	4.	314	ZN	II	2100.604	2099.939	300	4.	457
							ZN	II	2102.844	2102.178	200	4.	457
							ZN	II	2104.737	2104.071	24		154
							ZN	II	2105.058	2104.392	30		154
							ZN	II	2116.986	2116.318	5		154
							ZN	II	2123.411	2122.741	75		154
							ZN	II	2148.095	2147.419	75		154
							ZN	II	2151.214	2150.539	10		154
							ZN	II	2159.737	2159.060	2		154
							ZN	II	2164.154	2163.475	6		154
							ZN	II	2204.198	2203.511	15		154
							ZN	II	2210.863	2210.176	60		154
							ZN	II	2213.090	2212.402	3		457
							ZN	II	2273.852	2273.150	50		154
							ZN	II	2337.208	2336.493	2		154
							ZN	II	2347.403	2346.685	20		154

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	II	2350.767	2350.050	3		154		ZN	II	2805.55	2804.73	10		154	
ZN	II	2362.409	2361.688	6		154		ZN	II	2883.021	2882.177	50		154	
ZN	II	2384.648	2383.923	30		154		ZN	II	2888.52	2887.67	50		154	
ZN	II	2390.805	2390.078	20		154		ZN	II	2903.15	2902.30	100		154	
ZN	II	2422.18	2421.45	0		154		ZN	II	2917.40	2916.55	20		154	
ZN	II	2429.64	2428.90	0		154		ZN	II	2936.20	2935.34	20		154	
ZN	II	2433.48	2432.74	10		154		ZN	II	2943.12	2942.26	15		154	
ZN	II	2433.869	2433.131	5		154		ZN	II	2946.5	2945.6	2		154	
ZN	II	2436.50	2435.76	15		154		ZN	II	2957.55	2956.69	20		154	
ZN	II	2440.2	2439.5	15		154		ZN	II	2988.51	2987.64	10		154	
ZN	II	2502.744	2501.990	1000	3.	154		ZN	II	2993.03	2992.16	25		154	
ZN	II	2507.44	2506.69	10		154		ZN	II	2998.7	2997.8	50		154	
ZN	II	2528.71	2527.96	50		457		ZN	II	3010.0	3009.1	10		154	
ZN	II	2545.8	2545.0	5		457		ZN	II	3024.41	3023.53	10		154	
ZN	II	2558.713	2557.947	1000	3.	154		ZN	II	3025.33	3024.45	15		154	
ZN	II	2565.224	2564.456	30		154		ZN	II	3112.2	3111.3	20		154	
ZN	II	2568.564	2567.795	50		154		ZN	II	3119.5	3118.6	10		154	
ZN	II	2568.744	2567.975	50		154		ZN	II	3172.37	3171.45	100		154	
ZN	II	2571.422	2570.652	30	7.	154		ZN	II	3173.15	3172.23	100		154	
ZN	II	2613.725	2612.945	10		154		ZN	II	3179.503	3178.585	20		154	
ZN	II	2650.290	2649.502	8		154		ZN	II	3181.54	3180.62	5		154	
ZN	II	2653.733	2652.944	10		154		ZN	II	3186.692	3185.771	5		154	
ZN	II	2698.680	2697.883	10		154		ZN	II	3189.89	3188.97	15		154	
ZN	II	2693.39	2692.59	20		154		ZN	II	3197.235	3196.311	300		154	
ZN	II	2695.33	2694.53	20		154		ZN	II	3198.024	3197.100	100		154	
ZN	II	2696.76	2695.96	20		154		ZN	II	3264.4	3263.5	15		154	
ZN	II	2703.4	2702.6	10		154		ZN	II	3300.364	3299.417	50		154	
ZN	II	2710.39	2709.59	15		154		ZN	II	3303.869	3302.921	50		154	
ZN	II	2733.7	2732.9	5		154		ZN	II	3306.959	3306.010	75		154	
ZN	II	2739.13	2738.32	10		154		ZN	II	3312.204	3311.253	20		154	
ZN	II	2741.75	2740.94	10		154		ZN	III	2002.276	2001.629	00		162	
ZN	II	2747.8	2747.0	10		154		ZN	III	2003.179	2002.532	1		162	
ZN	II	2759.68	2758.87	10		154		ZN	III	2007.947	2007.298	20		162	
ZN	II	2764.769	2763.955	30	7.	154		ZN	III	2012.567	2011.918	35		162	
ZN	II	2767.54	2766.72	10		154		ZN	III	2013.560	2012.911	15		162	
ZN	II	2768.48	2767.66	10		154		ZN	III	2014.649	2014.000	10		162	
ZN	II	2779.8	2779.0	10		154		ZN	III	2019.225	2018.574	3		162	
ZN	II	2783.63	2782.81	30	7.	154		ZN	III	2025.699	2025.048	0		162	
ZN	II	2801.57	2800.74	20		154		ZN	III	2029.199	2028.547	1		162	
ZN	II	2802.791	2801.965	100		154		ZN	III	2029.334	2028.682	1		162	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	2031.303	2030.650	15		162		ZN	III	2078.806	2078.144	5		162	
ZN	III	2034.448	2033.794	10		162		ZN	III	2079.619	2078.957	12		162	
ZN	III	2036.605	2035.951	4		162		ZN	III	2079.70	2079.04	12		162	
ZN	III	2038.326	2037.673	20		162		ZN	III	2080.550	2079.887	20		162	
ZN	III	2038.983	2038.330	3		162		ZN	III	2083.455	2082.794	3		162	
ZN	III	2039.932	2039.279	25		162		ZN	III	2085.478	2084.816	15		162	
ZN	III	2040.235	2039.581	50		162		ZN	III	2089.700	2089.037	5		162	
ZN	III	2043.181	2042.527	10		162		ZN	III	2090.739	2090.075	1		162	
ZN	III	2046.714	2046.058	00		162		ZN	III	2092.703	2092.039	15		162	
ZN	III	2049.049	2048.393	10		162		ZN	III	2093.404	2092.739	2		162	
ZN	III	2053.176	2052.520	10		162		ZN	III	2097.560	2096.894	20		162	
ZN	III	2053.726	2053.070	5		162		ZN	III	2104.373	2103.707	50		162	
ZN	III	2054.431	2053.775	6		162		ZN	III	2105.337	2104.671	15		162	
ZN	III	2054.912	2054.256	00		162		ZN	III	2105.698	2105.032	0		162	
ZN	III	2055.693	2055.036	12		162		ZN	III	2106.081	2105.414	15		162	
ZN	III	2058.198	2057.541	0		162		ZN	III	2108.980	2108.312	10		162	
ZN	III	2058.974	2058.316	0		162		ZN	III	2109.931	2109.263	10		162	
ZN	III	2059.039	2058.381	12		162		ZN	III	2110.201	2109.533	20		162	
ZN	III	2060.939	2060.281	8		162		ZN	III	2110.278	2109.610	5		162	
ZN	III	2064.599	2063.940	10		162		ZN	III	2111.759	2111.091	1		162	
ZN	III	2065.630	2064.970	1		162		ZN	III	2112.072	2111.403	15		162	
ZN	III	2066.050	2065.390	1		162		ZN	III	2112.934	2112.265	4		162	
ZN	III	2066.334	2065.674	10		162		ZN	III	2114.074	2113.405	10		162	
ZN	III	2067.653	2066.995	15		162		ZN	III	2114.243	2113.574	8		162	
ZN	III	2070.553	2069.894	15		162		ZN	III	2116.002	2115.334	12		162	
ZN	III	2072.002	2071.342	30		162		ZN	III	2116.144	2115.476	10		162	
ZN	III	2072.262	2071.602	3		162		ZN	III	2116.313	2115.645	0		162	
ZN	III	2072.639	2071.979	8		162		ZN	III	2117.908	2117.240	12		162	
ZN	III	2072.801	2072.141	8		162		ZN	III	2118.649	2117.980	0		162	
ZN	III	2078.554	2077.892	5		162		ZN	III	2119.429	2118.760	3		162	
								ZN	III	2119.659	2118.990	0		162	
								ZN	III	2120.091	2119.422	2		162	
								ZN	III	2120.748	2120.079	0		162	
								ZN	III	2120.903	2120.234	1		162	
								ZN	III	2121.005	2120.336	1		162	
								ZN	III	2121.711	2121.041	5		162	
								ZN	III	2121.863	2121.193	5		162	
								ZN	III	2124.229	2123.559	1		162	
								ZN	III	2124.663	2123.993	2		162	
								ZN	III	2125.101	2124.430	3		162	

SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM	VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	2126.659	2125.988	2	162		ZN	III	2185.397	2184.714	8	162	
ZN	III	2127.474	2126.803	2	162		ZN	III	2194.412	2193.728	12	162	
ZN	III	2130.189	2129.517	3	162		ZN	III	2194.522	2193.838	5	162	
ZN	III	2133.363	2132.692	0	162		ZN	III	2195.934	2195.249	1	162	
ZN	III	2133.698	2133.027	0	162		ZN	III	2199.475	2198.789	00	162	
ZN	III	2135.876	2135.204	8	162		ZN	III	2200.533	2199.847	3	162	
ZN	III	2136.506	2135.834	25	162		ZN	III	2208.342	2207.656	3	162	
ZN	III	2137.799	2137.126	3	162		ZN	III	2211.128	2210.441	3	162	
ZN	III	2138.089	2137.426	4	162		ZN	III	2216.234	2215.545	1	162	
ZN	III	2139.827	2139.154	20	162		ZN	III	2218.422	2217.733	2	162	
ZN	III	2140.577	2139.904	12	162		ZN	III	2230.036	2229.345	40	162	
ZN	III	2141.512	2140.838	5	162		ZN	III	2239.027	2238.333	3	162	
ZN	III	2143.451	2142.777	2	162		ZN	III	2251.598	2250.902	0	162	
ZN	III	2145.417	2144.742	12	162		ZN	III	2253.553	2252.857	50	162	
ZN	III	2145.710	2145.035	00	162		ZN	III	2260.678	2259.980	0	162	
ZN	III	2147.531	2146.855	12	162		ZN	III	2264.543	2263.843	1	162	
ZN	III	2148.095	2147.419	20	162		ZN	III	2271.059	2270.357	0	162	
ZN	III	2148.457	2147.781	10	162		ZN	III	2272.418	2271.716	1	162	
ZN	III	2151.448	2150.773	5	162		ZN	III	2275.221	2274.520	0	162	
ZN	III	2153.626	2152.950	15	162		ZN	III	2277.324	2276.623	6	162	
ZN	III	2156.000	2155.324	15	162		ZN	III	2277.484	2276.783	4	162	
ZN	III	2156.998	2156.321	4	162		ZN	III	2277.804	2277.103	0	162	
ZN	III	2157.307	2156.630	8	162		ZN	III	2281.515	2280.812	0	162	
ZN	III	2157.489	2156.812	12	162		ZN	III	2282.835	2282.132	2	162	
ZN	III	2162.769	2162.091	12	162		ZN	III	2286.655	2285.951	2	162	
ZN	III	2163.212	2162.533	12	162		ZN	III	2286.790	2286.086	12	162	
ZN	III	2165.302	2164.623	3	162		ZN	III	2288.883	2288.178	5	162	
ZN	III	2165.788	2165.109	3	162		ZN	III	2293.297	2292.591	10	162	
ZN	III	2166.111	2165.432	4	162		ZN	III	2306.190	2305.482	1	162	
ZN	III	2168.705	2168.027	1	162		ZN	III	2307.408	2306.700	0	162	
ZN	III	2168.957	2168.279	0	162		ZN	III	2307.734	2307.026	10	162	
ZN	III	2170.172	2169.493	00	162		ZN	III	2308.308	2307.599	20	162	
ZN	III	2171.039	2170.360	15	162		ZN	III	2309.469	2308.760	10	162	
ZN	III	2171.911	2171.232	12	162		ZN	III	2314.317	2313.607	20	162	
ZN	III	2174.485	2173.805	12	162		ZN	III	2314.941	2314.230	10	162	
ZN	III	2174.869	2174.189	8	162		ZN	III	2318.376	2317.664	15	162	
ZN	III	2176.133	2175.453	12	162		ZN	III	2321.024	2320.311	1	162	
ZN	III	2178.508	2177.827	1	162		ZN	III	2323.835	2323.124	10	162	
ZN	III	2181.515	2180.833	25	162		ZN	III	2327.358	2326.646	2	162	
ZN	III	2185.123	2184.440	6	162		ZN	III	2327.791	2327.079	0	162	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	2328.483	2327.770	10		162		ZN	III	2380.843	2380.119	5		162	
ZN	III	2328.753	2328.040	10		162		ZN	III	2381.217	2380.493	5		162	
ZN	III	2328.830	2328.117	5		162		ZN	III	2381.837	2381.113	3		162	
ZN	III	2328.987	2328.274	10		162		ZN	III	2382.027	2381.303	4		162	
ZN	III	2329.916	2329.203	8		162		ZN	III	2382.508	2381.783	0		162	
ZN	III	2334.350	2333.636	5		162		ZN	III	2382.783	2382.058	1		162	
ZN	III	2334.965	2334.250	0		162		ZN	III	2382.973	2382.248	0		162	
ZN	III	2336.428	2335.713	1		162		ZN	III	2384.00	2383.27	2		162	
ZN	III	2338.343	2337.627	1		162		ZN	III	2386.8	2386.1	2		162	
ZN	III	2339.435	2338.719	0		162		ZN	III	2387.95	2387.22	10		162	
ZN	III	2339.875	2339.159	0		162		ZN	III	2391.60	2390.87	30		162	
ZN	III	2340.011	2339.295	2		162		ZN	III	2393.76	2393.03	80		162	
ZN	III	2345.935	2345.217	0		162		ZN	III	2393.97	2393.24	3		162	
ZN	III	2346.218	2345.500	2		162		ZN	III	2397.28	2396.55	25		162	
ZN	III	2348.393	2347.674	20		162		ZN	III	2397.68	2396.95	1		162	
ZN	III	2349.007	2348.288	20		162		ZN	III	2399.55	2398.82	50		162	
ZN	III	2349.717	2348.998	0		162		ZN	III	2402.22	2401.49	50		162	
ZN	III	2351.622	2350.905	5		162		ZN	III	2402.60	2401.87	2		162	
ZN	III	2352.148	2351.430	3		162		ZN	III	2403.18	2402.45	20		162	
ZN	III	2356.204	2355.485	2		162		ZN	III	2405.56	2404.83	12		162	
ZN	III	2357.068	2356.349	1		162		ZN	III	2405.94	2405.21	15		162	
ZN	III	2359.078	2358.358	10		162		ZN	III	2408.61	2407.88	3		162	
ZN	III	2360.469	2359.749	5		162		ZN	III	2409.18	2408.45	100		162	
ZN	III	2360.873	2360.153	3		162		ZN	III	2419.46	2418.73	1000		162	
ZN	III	2361.927	2361.206	12		162		ZN	III	2420.11	2419.38	2		162	
ZN	III	2362.409	2361.688	6		162		ZN	III	2421.46	2420.73	100		162	
ZN	III	2364.908	2364.187	2		162		ZN	III	2423.47	2422.74	3		162	
ZN	III	2366.009	2365.287	5		162		ZN	III	2424.06	2423.33	500		162	
ZN	III	2366.879	2366.157	3		162		ZN	III	2427.53	2426.79	10		162	
ZN	III	2367.914	2367.192	3		162		ZN	III	2427.68	2426.94	500		162	
ZN	III	2368.254	2367.531	1		162		ZN	III	2427.87	2427.13	10		162	
ZN	III	2371.530	2370.806	3		162		ZN	III	2430.20	2429.46	10		162	
ZN	III	2372.126	2371.402	15		162		ZN	III	2431.83	2431.09	10		162	
ZN	III	2372.549	2371.825	0		162		ZN	III	2435.01	2434.27	100		162	
ZN	III	2373.234	2372.510	5		162		ZN	III	2438.22	2437.48	80		162	
ZN	III	2374.351	2373.627	0		162		ZN	III	2438.91	2438.17	50		162	
ZN	III	2375.420	2374.695	8		162		ZN	III	2442.70	2441.96	100		162	
ZN	III	2375.660	2374.935	0		162		ZN	III	2445.67	2444.93	100		162	
ZN	III	2378.137	2377.414	6		162		ZN	III	2448.27	2447.53	20		162	
ZN	III	2378.492	2377.769	3		162		ZN	III	2448.91	2448.17	30		162	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	2451.01	2450.27	500		162		ZN	III	2522.75	2521.99	25		162	
ZN	III	2451.96	2451.22	10		162		ZN	III	2522.82	2522.06	100		162	
ZN	III	2458.74	2458.00	10		162		ZN	III	2527.13	2526.37	10		162	
ZN	III	2461.16	2460.42	50		162		ZN	III	2527.74	2526.98	40		162	
ZN	III	2461.66	2460.92	10		162		ZN	III	2528.72	2527.96	15		162	
ZN	III	2462.75	2462.01	50		162		ZN	III	2529.38	2528.62	20		162	
ZN	III	2463.30	2462.56	40		162		ZN	III	2532.85	2532.09	50		162	
ZN	III	2464.04	2463.30	100		162		ZN	III	2534.05	2533.29	50		162	
ZN	III	2464.39	2463.65	80		162		ZN	III	2536.62	2535.86	100		162	
ZN	III	2467.80	2467.05	1000		162		ZN	III	2540.14	2539.38	50		162	
ZN	III	2469.61	2468.87	500		162		ZN	III	2548.36	2547.60	10		162	
ZN	III	2473.38	2472.63	100		162		ZN	III	2553.30	2552.54	20		162	
ZN	III	2474.03	2473.28	100		162		ZN	III	2555.04	2554.28	20		162	
ZN	III	2474.57	2473.82	50		162		ZN	III	2559.23	2558.46	20		162	
ZN	III	2480.55	2479.80	100		162		ZN	III	2572.05	2571.28	20		162	
ZN	III	2481.47	2480.72	10		162		ZN	III	2576.13	2575.36	200		162	
ZN	III	2484.81	2484.06	15		162		ZN	III	2576.56	2575.79	500		162	
ZN	III	2485.11	2484.36	30		162		ZN	III	2579.55	2578.78	10		162	
ZN	III	2485.28	2484.53	100		162		ZN	III	2582.91	2582.14	30		162	
ZN	III	2485.78	2485.03	5		162		ZN	III	2586.85	2586.08	80		162	
ZN	III	2486.91	2486.16	100		162		ZN	III	2591.16	2590.39	80		162	
ZN	III	2487.62	2486.87	200		162		ZN	III	2591.93	2591.16	50		162	
ZN	III	2491.95	2491.20	1000		162		ZN	III	2593.70	2592.93	500		162	
ZN	III	2492.80	2492.05	500		162		ZN	III	2597.84	2597.06	30		162	
ZN	III	2496.14	2495.39	20		162		ZN	III	2601.72	2600.94	100		162	
ZN	III	2496.93	2496.18	100		162		ZN	III	2603.97	2603.19	5		162	
ZN	III	2497.88	2497.13	50		162		ZN	III	2604.77	2603.99	20		162	
ZN	III	2498.57	2497.82	50		162		ZN	III	2607.88	2607.10	10		162	
ZN	III	2499.08	2498.33	10		162		ZN	III	2611.40	2610.62	50		162	
ZN	III	2504.03	2503.28	50		162		ZN	III	2612.46	2611.68	15		162	
ZN	III	2504.86	2504.11	30		162		ZN	III	2615.25	2614.47	20		162	
ZN	III	2505.3	2504.5	5		162		ZN	III	2616.50	2615.72	15		162	
ZN	III	2508.84	2508.09	50		162		ZN	III	2616.62	2615.84	30		162	
ZN	III	2509.78	2509.03	8		162		ZN	III	2618.18	2617.40	10		162	
ZN	III	2510.53	2509.78	40		162		ZN	III	2618.7	2617.9	5		162	
ZN	III	2515.79	2515.03	50		162		ZN	III	2619.44	2618.66	50		162	
ZN	III	2516.53	2515.77	100		162		ZN	III	2621.98	2621.20	10		162	
ZN	III	2516.69	2515.93	40		162		ZN	III	2622.43	2621.65	40		162	
ZN	III	2521.17	2520.41	10		162		ZN	III	2622.75	2621.97	15		162	
ZN	III	2521.33	2520.57	15		162		ZN	III	2622.95	2622.17	30		162	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES	SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	2623.58	2622.80	5		162		ZN	III	2737.1	2736.3	1		162	
ZN	III	2626.60	2625.82	5		162		ZN	III	2752.12	2751.31	10		162	
ZN	III	2629.87	2629.09	40		162		ZN	III	2755.96	2755.15	20		162	
ZN	III	2630.16	2629.38	20		162		ZN	III	2789.64	2788.82	10		162	
ZN	III	2631.51	2630.73	15		162		ZN	III	2839.49	2838.66	15		162	
ZN	III	2639.27	2638.48	10		162		ZN	III	2845.70	2844.86	1		162	
ZN	III	2641.13	2640.34	500		162		ZN	III	2845.92	2845.08	1		162	
ZN	III	2642.21	2641.42	5		162		ZN	III	2849.80	2848.96	20		162	
ZN	III	2642.70	2641.91	5		162		ZN	III	2850.06	2849.22	30		162	
ZN	III	2653.95	2653.16	35		162		ZN	III	2852.93	2852.09	5		162	
ZN	III	2655.20	2654.41	15		162		ZN	III	2853.88	2853.04	15		162	
ZN	III	2655.89	2655.10	10		162		ZN	III	2854.68	2853.84	15		162	
ZN	III	2658.94	2658.15	30		162		ZN	III	2858.43	2857.59	10		162	
ZN	III	2659.07	2658.28	15		162		ZN	III	2860.44	2859.60	1		162	
ZN	III	2659.44	2658.65	50		162		ZN	III	2860.9	2860.1	0		162	
ZN	III	2660.47	2659.68	100		162		ZN	III	2867.00	2866.16	10		162	
ZN	III	2662.45	2661.66	5		162		ZN	III	2868.0	2867.2	0		162	
ZN	III	2662.64	2661.85	15		162		ZN	III	2873.02	2872.18	5		162	
ZN	III	2663.57	2662.78	15		162		ZN	III	2876.37	2875.53	15		162	
ZN	III	2664.33	2663.54	30		162		ZN	III	2876.52	2875.68	15		162	
ZN	III	2665.70	2664.91	10		162		ZN	III	2876.94	2876.10	10		162	
ZN	III	2667.46	2666.67	40		162		ZN	III	2878.09	2877.25	1		162	
ZN	III	2672.5	2671.7	10		162		ZN	III	2880.15	2879.31	10		162	
ZN	III	2673.24	2672.45	5		162		ZN	III	2880.67	2879.83	15		162	
ZN	III	2674.98	2674.19	20		162		ZN	III	2882.03	2881.19	10		162	
ZN	III	2681.39	2680.59	10		162		ZN	III	2884.76	2883.92	5		162	
ZN	III	2682.0	2681.2	15		162		ZN	III	2886.33	2885.49	5		162	
ZN	III	2684.13	2683.33	50		162		ZN	III	3186.68	3185.76	5		162	
ZN	III	2686.3	2685.5	2		162		ZN	III	3206.6	3205.7	30		162	
ZN	III	2689.11	2688.31	10		162		ZN	III	3224.34	3223.41	3		162	
ZN	III	2692.9	2692.1	5		162		ZN	III	3239.21	3238.28	5		162	
ZN	III	2693.55	2692.75	10		162		ZN	III	3250.39	3249.45	10		162	
ZN	III	2700.22	2699.42	10		162		ZN	III	3289.55	3288.60	10		162	
ZN	III	2700.99	2700.19	0		162		ZN	III	3315.20	3314.25	0		162	
ZN	III	2701.96	2701.16	10		162		ZN	III	3318.10	3317.15	40		162	
ZN	III	2707.52	2706.72	10		162		ZN	III	3335.81	3334.85	100		162	
ZN	III	2707.72	2706.92	10		162		ZN	III	3337.79	3336.83	15		162	
ZN	III	2721.56	2720.76	50		162		ZN	III	3374.71	3373.74	1		162	
ZN	III	2728.37	2727.56	10		162		ZN	III	3383.83	3382.86	1		162	
ZN	III	2734.80	2733.99	10		162		ZN	III	3404.82	3403.85	100		162	

SPECTRUM		VACUUM WAVELENGTH	AIR WAVELENGTH	INTENSITY	MULTIPLY	REFERENCE	NOTES
ZN	III	3427.07	3426.09	30		162	
ZN	III	3447.20	3446.21	15		162	
ZN	III	3447.53	3446.54	10		162	
ZN	III	3459.14	3458.15	25		162	
ZN	III	3463.25	3462.26	30		162	
ZN	IV	2010.289	2009.612	75		154	
ZN	IV	2041.524	2040.864	10		154	
ZN	IV	2079.690	2078.992	20		154	
ZN	IV	2081.079	2080.415	25		154	
ZN	IV	2081.728	2081.061	15		154	
ZN	IV	2083.200	2082.507	1		154	
ZN	IV	2134.426	2133.746	00		154	
ZN	IV	2145.416	2144.742	15		154	
ZN	IV	2161.738	2161.028	2		154	
ZN	IV	2218.767	2218.039	10		154	
ZN	IV	2253.570	2252.857	80		154	
ZN	IV	2295.680	2294.940	5		154	
ZN	IV	2313.42	2312.72	6		314	
ZN	IV	2338.359	2337.627	6		154	
ZN	IV	2473.23	2472.46	15		154	
ZN	IV	2502.755	2502.001	8		314	
ZN	IV	2558.725	2557.958	40		314	

REFERENCE LIST

0000	NAVAL POSTGRADUATE SCHOOL	1 REFERENCES.
0000	MONTREY, CALIFORNIA 93940	1 REFERENCES.
0000	FOLLOWING IS A LISTING OF THE REFERENCE DECK, IN NUMERICAL ORDER.	1 REFERENCES.
0000	12/15/1977	1 REFERENCES.
0000		1 REFERENCES.
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0071	BOCKASTEN, K., R. HALLIN, AND T.P. HUGHES, PROC. PHYS. SOC. 81, 522-30 (1963), CL(NE VI-VII).	13 REFERENCES.
0072	BOCKASTEN, K., R. HALLIN, K.B. JOHANSSON, AND P. TSUI, PHYSICS LETTERS (NETH.) 8, 181-2 (1964), CL(N V, N VI, O III, O V).	4 REFERENCES.
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0083	BOCKASTEN, K. AND K.B. JOHANSSON, ARK. FYS. 38, 563-84 (1968), CL(O V).	28 REFERENCES.
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0090	BERRY, H.G., J. OPT. SOC. AM. 61, 983 (1971), CL(S IV-VI).	8 REFERENCES.
0092	BASHKIN, S. AND I. MARTINSON, J. OPT. SOC. AM. 61, 1686-92 (1971), CL(CL II-VII).	6 REFERENCES.

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0107	BERRY, H.G., R.M. SCHECTMAN, I. MARTINSON, W.S. BICKEL, AND S. BASHKIN, J. OPT. SOC. AM. 60, 335-44 (1970).	36 REFERENCES.
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0164	EDLEN, B., ARK. FYS. 4, 441-52 (1952), CL(O VII, F VIII).	3 REFERENCES.
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0175	EDLEN, B., Z. PHYSIK 93, 726-30 (1935), CL(O II-IV).	9 REFERENCES.
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0186	EDLEN, B. AND P. RISBERG, ARK. FYS. 10, 553-66 (1956), CL(CA II).	11 REFERENCES.
0188	EDLEN, B. AND P. SWINGS, ASTROPHYS. J. 95, 532-54 (1942), CL(FE III).	468 REFERENCES.

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0000		5 REFERENCES.
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